ABSTRACT OF THE

Inaugural Address

Delivered at the Sixteenth Congress of the Sanitary Institute at Leeds on Sept. 14th,

BY ROBERT FARQUHARSON, M.D. EDIN., LL.D. ABERD., F.R.C.P. LOND., M.P.

GENTLEMEN,—My feelings on rising to address you this afternoon are somewhat mixed, and I venture, although not very confidently, to hope that I may be able to use this platform as an authoritative tribune from which to speak words which may be suggestive if not weighty. Such an opportunity probably only occurs once in a lifetime, and it may well be a subject for anxious reflection how best to use, without abusing, the indulgence of the influential audience I see before me. But other considerations have urgently claimed my attention since Sir Douglas Galton first whispered into my ear the tempting offer of this presidential chair, and as this day drew nearer they also came nearer to my mind.

The responsibility of an introductory orator on such an occasion as this is much increased by the fact that hygiene has now become fashionable, and that most people nowadays know at all events the elementary principles on which it works. All great subjects like this, and more especially those which involve some dislocation of antiquarian superstition and domestic prejudice, must pass through a variety of stages or cycles, and varying waves of interest beat on the mental shore.

First, we have the stage of ridicule, a difficult one to get over, but which we have at last successfully surmounted. Next we find that when the general public recognise that we are in earnest the stage of active opposition sets in, and vested interests and pig-headed ignorance, and the self-complacent argument of "why not let it alone," are marshalled in warlike array against the new broom which tries to sweep the Augean stable clean. But we have now nearly outlived all this; ventilators are no longer stuffed up, the working classes, no less than their employers, are beginning to be connoisseurs in the quality of their atmospheric conditions, enjoy a good wash as much as a university graduate, and are fully prepared to appreciate the advantages of hygienic house accommodation at other people's expense. Associations like our own, and the National Health Society, and the St. John Ambulance Association, and able and zealous missionaries, have not spoken and written in vain, and now we live in an age of sanitary progress, where the little knowledge, which is safe not dangerous, persuades its possessor of its scanty amount, and tells him where to go to make good his deficiencies. For instance, no properly instructed person in these enlightened days would take a house without a thorough inspection of, and report on, its sanitary arrangements; water analysis and food analysis keep us fairly free from adulteration, and most of us know pretty well, or at all events know how to get the information, as to the amount of help given us by the law in keeping our health fairly sound. For the conclusion is inevitable that the race is to the swift and the battle to the strong, and that unless we are well equipped physically for the contest we will be outpaced and shoved aside, and laid on the shelf. The well-worn quotation from Herbert Spencer sums up the whole case: "The first requisite of life is to be a good animal, and to be a nation of good animals is the first condition of national prosperity."

[Dr. Farquharson here regretted the monotony of modern labour, which, he suggested, is largely due to the minute subdivision of employments. He then made some reference to recent advances in physiological knowledge and continued:]

Some will probably ask this question: "It is all very fine talking about fashion and popularity and progress; can you show any tangible results? Is the human race any longer lived, or better, or happier at present than in the good old days of pre-hygiene?" Now if any lingering shade of romantic leaning towards the life conditions of mediæval or post-mediæval England still haunts your mind, you may lay the ghost by diligent perusal of Simon's "English Sanitary Institutions" and the "Health of Nations," in which the work of Edwin Chadwick is reviewed by Richardson—that bright and kindred spirit; and I guarantee that even if imagination still gilds the remote history of the past you will thank your stars that your lines have been cast in the cleaner and pleasanter places of the Victorian era. There is no doubt that the average sum of life has been sensibly prolonged. During the last quarter of a century the death-rate has been reduced from about 22 to 18 per annum, and whilst I give you sanitarians your full meed of praise for having, by your excellent work, abolished some diseases and lessened the incidence of others, we medical men intend to claim some credit too. We diagnose disease earlier and treat it far better, making much less demands on the constitutional vigour of our patients, and keeping in mind the good old principle that prevention is better than cure. For the future let Professor Matthew Hay, of Aberdeen, speak. He writes to me: "Progress of the death-rate downwards must in the future be less than in the past. A death-rate of 10 per 1000 would mean that everybody born lived to 100 years or an average of that. Probably it will be found that the mutual elements of decay in men, as in all living things, which make eventually for death, independently of environment, will not permit of a lower general death-rate than about 14 to 15 even under the most favourable hygienic conditions reasonably attainable. So that by the time we have gone as far in reducing the death-rate as we have come in the past quarter of a century we shall have reached the ultimate minimum, but it will certainly not be in another quarter of a century." More evidence can be found in the Reports of the Local Government Board, where, under the skilful guidance of Sir John Simon and Sir George Buchanan and Sir Richard Thorne Thorne, some of the most acute minds in England have been unravelling abstruse sanitary problems and tracking out from clues invisible to the ordinary eye sanitary defects which were poisoning districts and destroying human life. But these are scattered and not always accessible, and I strongly commend to your attention two capital little books which strike the nail very directly on the head. The first of these is by your respected townsman, Mr. Pridgin Teale, who, in the intervals of a brilliant and successful surgical career, has found time to preach the doctrine that a nation's health is a nation's wealth, and to furnish a series of object lessons of the most clear and practical if alarming kind. The second is by our esteemed friend and associate, Professor Corfield, one of the pioneers of sanitary progress, and it is called "Disease and Defective House Sanitation." It consists of two short lectures, but it is crammed with suggestive matter, and he enumerates the following diseases as directly caused by the defects included in his title—sore throats, diphtheria, scarlet fever, blood poisoning, puerperal fever, pneumonia, diarrhœa, enteric fever, and general malaise. All these have resulted from badly-connected ventilating pipes, badly-trapped waste pipes, defective drains, split soil pipes, foul pan water closets, and very frequently from escapes of gas, a cause more especially of sore throats, new to me, I must confess. May I give you one other illustration? I think it was in 1884 or 1885 that serious complaints began to be made about the drainage and ventilation of the House of Commons. A committee was appointed under the presidency of Sir Henry Roscoe to examine the whole question, and we had to tell the legislators on the basis of a very important investigation by the late Professor Carnelley, that they were actually breathing sewer gas, and that the sooner they put their house in order the better for themselves and the country. So £10,000 were voted *nem. con.*, Shone's ejector cut us off from the main sewer, and I make so bold as to claim for this sanitary operation national importance in improving the health and temper of our senators and enhancing the quality of their work.

The benefits conferred by modern civilisation are, however, accompanied by some drawbacks. In the seventeenth century the death-rate was said to be 7 per cent.; it is now about 18 per 1000, the advantage being mainly between the ages of five and thirty-five, and our chances of reaching this maximum period of longevity are distinctly increased. The majority of us, however, are older than that, and we want to know what is to become of us, and vital statistics do not give us much comfort, for after middle life, when we stand on the tableland and look over the edge, before stepping downhill, we do not live longer and we break down sooner. Why is this? One evil of civilisation is the tendency to crowd into big towns, where houses are dear and often bad, the air is usually poisoned with smoke, and, as Dr. Poore has well shown in his most interesting work on Rural Hygiene,

there are serious dangers connected with defects in our complicated arrangements for drainage and sewage disposal. This is depressing, but it has its bright side. No doubt it is dangerous to be placed within easy reach of receptacles of foul air and sewer gas, as we all are, and necessarily must be, under the system of water-borne sewage common to our great towns; but the greater the risk the greater should be the care exerted to keep it off. It would be a good thing if workmen, and more especially those who manufacture the complicated structures which modern hygiene requires, should not only feel but carry into practice the full sense of responsibility resting on them in connexion with their trade; and that they should be taught how a bit of scamped work—a leaking cesspool, or a badly placed or constructed drain, or a badly-socketed soil-pipe, or any derangement in the mechanical contrivances designed to keep out the sewer gas which is always trying to force its way in—may destroy human life just as effectually as poison or the knife. This is why I have persistently supported the Plumbers' Registration Bill in and out of Parliament, being convinced, as I am, that without establishing a monopoly, or doing any real harm to any vested interest, the establishment of a defined curriculum, followed by registration and examination, will raise the status and character of the workman, and by increasing his sense of responsibility and his interest in his work will not only confer benefits on him, but also on those by whom he is employed.

The next point I wish to refer to is the curious way in which, when we have abolished one set of diseases, another band of successors sometimes springs up hydra-headed to plague poor humanity. I suppose it must be so, for we poor mortals have not put on immortality, but must shuffle off our mortal coils, in some swift or lingering way, so that if we are prevented from dying from one disease we must of sad necessity die from another, and diminution of one death-rate involves increase somewhere else. Enteric fever remains pretty stationary in the last ten years, but a drop from 309 in 1876 to 175 in 1895 does credit to our sanitary administration, and phthisis has gone down from 26,443 in 1876 to 22,775 in 1894. Small-pox has taken a satisfactory dip downward from 2405 in 1876 to 33 in 1895. Measles, scarlet fever, and whooping cough have killed fewer than formerly, but, *per contra*, diphtheria has largely increased, and that is no doubt due, as Sir R. Thorne Thorne says in a private communication which I have received from him, "to the ever-growing facilities for personal infection, and other similar points have followed on the success in herding our child population into elementary schools at the very age at which they are most susceptible to this disease." Other diseases have also increased, and the point I wish to make is this, that they are mostly diseases connected with the nervous system, and that Crichton Browne was probably right in his opinion that not merely the nervous temperament, but the neurotic diathesis is on the increase among us. To begin with, it is a mournful but I fear an undoubted fact that more people go mad than formerly. I have not by me any statistics to prove this beyond the report of the Registrar-General for 1895, but there I find under the heading of insanity and general paralysis—a disease which was seldom heard of in former years—3620 deaths in 1895, against 933 in 1876.

Angina pectoris, a typically neurotic disorder, has increased within the same period from 397 to 696; valvular disease of the heart, which has some practical sympathy with the neurotic diathesis, has gone up from 274 to 10,072; whilst Bright's disease, the frequent causation of which by sudden mental shock has been demonstrated by Clifford Albutt, shows an alarming rate of increase from 4100 to 8351. Cancer has nearly doubled since 1876, and diabetes reached its highest point in 1895, accounting for 2265 deaths over 910 in 1876, whilst most of us know only too well the firm grip taken by influenza on the British constitution, and the way in which in more recent years it has attacked the nervous system. There seems no doubt, therefore, about the fact that we are now in the midst of a neurotic age, and, moreover, an age which is essentially anæmic. How many young girls in any rank of life escape passing through a bloodless stage, which suggests a strike or a lock-out among their red corpuscles, and a consequent stagnation of their vital processes?

Let us take another glance at the Registrar-General's report, where we will see that deaths from anæmia, chlorosis, and leucocythæmia have advanced from 576 in 1876 to 1883 in 1895, and this, together with a glance at the cheeks of the rising generation, must convince you that this increase of pallor is only too real.

[Dr. Farquharson here remarked that he wished to say a word in favour of sexual selection, commending the Vicar of Wakefield for choosing his wife as she chose her wedding-dress—"on account of her wearing qualities." With respect to vaccination, he suggested that the age should be raised so as to avoid the teething and eruptive periods, and that every infant should have four good marks, the operator being preferably a public vaccinator. He then referred to school life and house accommodation, and concluded as follows:]

Each of us is individually responsible to ourselves and to others for our scheme of sanitation, and then we pass into the hands of local authorities, who are doing good work, who generally give you value for your money, and whose beneficial operations I hope you duly appreciate. But over them stands the House of Commons, and I am glad of this opportunity of saying that I have a very poor opinion of that legislative assembly in its dealings with public health. Both sides are bad, but that to which I belong is, I think, the worst, for suspicion of scientific methods and of progressive sanitation is deep-rooted in certain Radical quarters, and abstract views of personal liberty and distrust of the so-called tyranny of medical men sway a kind of plausible sentiment which is usually irresistible in its paralysing effects on hygienic legislation. As a Member lately remarked with refreshing frankness when we were considering the Public Health (Scotland) Bill, "When I see the doctors on both sides of the House my instinct tells me that something is wrong and I will vote against the amendment." Under such conditions the private Member can do nothing, beyond being usefully employed in stimulating public opinion in and outside the House, until particular problems reach the acute stage and are taken under Government protection. In conclusion, let me reiterate the strong wish I have already publicly expressed in favour of a Ministry of Health, a department of the State which would collect into one harmonious whole the scattered threads of sanitary legislation, which would focus all health questions, and admission to which would be an object of honourable ambition to the best scientific talent of the day.

ABSTRACT OF A

Post-Graduate Address

ON

THE MEDICAL ASPECTS OF APPENDICITIS.

Delivered at the West London Hospital on Feb. 3rd, 1897,

BY DONALD W. C. HOOD, M.D. CANTAB., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO THE WEST LONDON HOSPITAL.

GENTLEMEN,—That form of local peritonitis so frequently met with in the right iliac fossa and known under the various names, typhlitis, perityphlitis, or appendicitis, presents numerous features of interest both to the physician and the surgeon. I have thought that it might be useful on the present occasion to discuss the disease from its medical aspects alone, for while fully acknowledging the brilliant achievements of surgery in connexion with abdominal diseases, I have no hesitation in affirming that we are in danger of looking upon the treatment of appendicitis from a too exclusive point of view, and I fear that many, by forgetfulness of the good results which follow a purely medical course of treatment, lose the valuable opportunities which only come to those who see the disease at the earliest onset.

In considering the diagnosis of appendicitis we must first glance at the forms or varieties under which the disease is met with, and we must consider briefly those affections with which it is liable to be confounded. We meet with appendicitis in one of two principal forms—namely, (1) an acute

peritonitis due to sudden perforation of the appendix, and (2) localised inflammation in connexion with the cæcum or appendix.

The first variety is happily rare, and I believe is in many cases akin to that form of perforation met with in gastric ulcer and latent typhoid fever. During twenty-five years' fairly active work I have never met with such a case either in private or hospital practice, and I doubt whether such perforation ever occurs without some premonitory symptoms. These cases are usually met with in the post-mortem room, and they may come there without a correct diagnosis, but this scarcely proves that symptoms were entirely absent. Some individuals, however, have an exceptional power of withstanding the constitutional disturbances of severe diseases, this tolerance of disease being especially marked in latent typhoid fever, and in acute perforating gastric ulcer. Hence it is possible for perforation of the appendix to take place even where those symptoms which we consider to be pathognomonic of the condition are latent, if not entirely absent. The following case proved to me that well-marked objective symptoms may be present without producing much constitutional distress. A medical friend called upon me one afternoon, stating that he had not been feeling well for some days, and I was surprised to find the iliac fossa occupied by a large tumour. Within a few hours of seeing me he was examined by a surgeon, who subsequently informed me that he looked upon the tumour as being malignant. However, a few days' rest in bed and opium as a remedy restored my friend to perfect health, and there has been no recurrence of abdominal trouble.

The second or more ordinary form of appendicitis can be subdivided into many clinical states, but I doubt if we gain much by such subdivision. We have clinically to consider two main conditions of localised inflammatory mischief within the right iliac fossa, one with tumour and one without. In other words, the inflammatory mischief may be circumscribed or more diffuse. The first and by far more usual condition can only be overlooked or misinterpreted through carelessness or ignorance; the other form, however, is much less common, and the symptoms are frequently liable to misinterpretation. A good instance of this variety came under my notice last year. The patient had gone to church on a Sunday feeling well; after the service she felt poorly, and it was thought that she had been chilled, the wind having been specially keen and penetrating. That night she was seized with sharp abdominal discomfort and diarrhœa, which continued during the following day, the temperature running up to 101° F. She was given a "dose," but the pain, pyrexia, and diarrhœa continued for the next four days. It was on the evening of the fourth day, that I first saw the patient. She looked very ill, had a small, rapid pulse, raised temperature, dry red tongue, and frequent diarrhœa. The abdomen was flat, and there were no rose spots. Extreme pain was felt on making light pressure on the right iliac area. No tumour could be detected. It appeared to me that the balance of clinical evidence was in favour of the attack being due to local trouble rather than to specific fever. The following day a pultaceous blood-stained stool was passed. The patient was still in a very critical state. The diarrhœa had ceased, there was pain in the iliac fossa, but no tumour or thickening. The next morning on making careful pressure over this area there was decided resistance, giving the sensation of infiltrated tissue. The condition of the patient then improved, and she made a complete recovery, but from first to last there was no decided tumefaction of the part.

The ordinary form of appendicitis as met with in hospital patients is unattended with much difficulty as regards diagnosis, because the disease is well developed and past the primary stage of initial onset, but with private patients the case is different, and more often than not we have the opportunity of investigating the symptoms of the attack within a few hours of their commencement.

The first symptom is pain, which may vary in amount from extreme pain, almost agony, to mere abdominal discomfort. As far as my experience serves me, commencing appendicitis is invariably attended with some rise of temperature. In the larger proportion of simple abdominal ailments attended by pain there is no rise of temperature; but abdominal discomfort with diarrhœa and raised temperature has been far from unusual with certain forms of influenza, and this fact must be kept in view. If, then, in any patient who complains of aching in the abdomen we find a raised temperature, it is necessary to carefully examine the part. This cannot be properly done unless the patient is undressed and lying down. Even in the earliest stages inspection will often give us assistance; aided by good light you will at once be struck by the absence of movement over the affected area. The portion of the abdominal parietes lying between the ribs and the pelvic crest moves but little if at all during respiration. This want of muscular action is far more evident later, but it will be present at first in some degree. I have often been able to demonstrate the absence of movement when not easily detected by the eye by placing on the part a long lever such as a stethoscope. In the first few hours of illness pain, with even but a slight rise of temperature, should be sufficient to place us on our guard, and when, after baring the abdomen, immobility of the part is seen, it is almost pathognomonic of the specific nature of the attack, and scarcely renders necessary the putting to proof the presence of the fourth symptom—tenderness on palpation. In recent years much stress has been laid upon the limitation of pain to one spot, the so-called "McBurney's point," but I prefer to trust to the general conditions rather than to any one limited point of more decided pain than another. Far more help will be given by placing the palm of a warm hand upon the abdomen. Gentle pressure over the iliac fossa will in ninety-nine cases out of a hundred give all the information required, and will be far less likely to lead to error than if the tips of the fingers are pressed into a part which is even in many normal individuals exceedingly sensitive. As time measured by hours passes on we shall find evidence of resistance, thickening of deep parts, and finally tumour, which may in some cases encroach largely upon the abdominal cavity. The whole abdomen may become swollen and tender. The early stage of fever plus abdominal tenderness is well shown in the following case. A girl, aged nine years, had suffered from a sharp attack of appendicitis in December, 1881. On Jan. 15th, 1882, her nurse found her crying in bed and complaining of stomach ache. The child had gone to bed apparently in perfect health and had completely recovered from a previous attack. When seen by me within an hour of the first complaint I found tenderness of the iliac fossa and a temperature of 100° F. The attack was a severe one, the temperature fluctuating between 101° and 103° for eight days. The bowels acted on the ninth day. The patient made a perfect recovery and since the illness has had no return of abdominal trouble.

In addition to the four cardinal symptoms of appendicitis, the pain, fever, local tenderness, and immobility of abdominal walls, there are other symptoms which attend the progress of the attack, the most common being vomiting. I find that in 308 cases this symptom was specially noted in 208 patients. It is a symptom which forebodes neither good nor evil. Appendicitis may be complicated by either constipation or diarrhœa; the former occurred in 145 patients out of 308, the latter (diarrhœa) in 58 patients out of the same number. The presence of diarrhœa in the early stage frequently leads to an erroneous diagnosis, so that it is well to bear in mind this not unusual state of bowel. Of the 58 cases in which looseness of bowel was present, 43 made good uncomplicated recoveries and 3 recovered with abscess. Nine patients died; of these 2 succumbed to general peritonitis and 7 suffered from abscesses.

Some writers make a distinction between those attacks of local peritonitis which are accompanied by exudation of coagulable material but in which the symptoms pass away with more or less rapidity, and that class of cases where the inflammatory mischief leads up to the formation of pus. Clinically I believe it to be absolutely impossible to distinguish between these two classes of case in their earlier stages, and I think it is equally impossible to say whether or not they have the same pathological cause. On this point our hospital cases afford us but little assistance. These patients being admitted at every stage of their illness, any mortality-rate obtained from a series of cases is grossly misleading as to the direct effect of treatment. Dr. Eyre has very kindly and with great care and labour examined the medical records of Guy's Hospital between the years 1867-1895, and has tabulated for me all the cases of appendicitis admitted as such during that period. Thus among 308 cases admitted during twenty-nine years fifty-five patients died. But when these individual cases were examined we found that in a large proportion the patient died within a few hours of admission, and many were admitted after the formation of an abscess. Such statistics

are of almost no value as indicating the efficacy or the disadvantages of any line of active treatment.

My experience of surgery in connexion with appendicitis is *nil*; every case that has come under my care has hitherto made a complete recovery, with the solitary exception of a man admitted into the North West London Hospital some years ago suffering from a second attack. He was admitted with symptoms of general peritonitis and an operation was not considered advisable. He had apparently quite recovered from the primary attack. The treatment adopted before admission had been that of purging.

The onset of the affection varies much—it may be acutely andden or creep insidiously on for several days. The following history is of value as it comes from the hand of a medical man who placed himself under my care in May, 1894. The patient stated: "On getting into bed I was suddenly seized with shivering and vomiting; my temperature was 100·6° F. The abdomen generally was tender. I passed a very restless night, nausea and retching being continuous. Abdominal pain was acute, but so far not localised. The temperature was 101°. During the day symptoms were much the same. During the second night the pain became localised in the right iliac fossa and the diagnosis was clear." I saw the patient on the third day of illness. The right iliac fossa was occupied by a large tender tumour. The case did well, the bowels being relieved on the tenth day. There has been no return of the inflammatory mischief.

The symptoms may begin in a most indefinite manner and run a very slow course, in such cases being mostly gastric in character and liable to be treated as such.

[Dr. Hood here gave clinical descriptions of several other cases. He also quoted from Dr. Hawkins's monograph on Diseases of the Vermiform Appendix, and remarked that peritonitis occurring in connexion with the uterine appendages may sometimes create difficulties in the diagnosis. He continued:]

In the course of the last fifty years the treatment of these local inflammations occurring within the abdomen has passed through three stages. During the first period the main treatment was that of opium combined with calomel. Gradually the calomel was omitted from the prescription and treatment remained with opium alone. During later years opium with many has been dreaded, and early operation has taken its place. For my own part I attach the utmost importance to the making of an early diagnosis and to the early use of opium; I scrupulously avoid all aperient remedies.

The cases which have been under my own care include twelve private patients and twenty-three in hospital, all of whom, with the one exception above alluded to, made a good recovery, and in no instance was there suppuration. The cases seen in private have remained under observation and have been free from any form of abdominal discomfort. Hospital cases do not afford evidence of the good results which follow a simple medical treatment, in consequence of the fact that a large proportion of them do not apply until long after the commencement of their symptoms. My patients, on the contrary, with scarcely an exception, came under treatment at a very early stage of illness, and are of value as showing the results of a purely medical treatment. Practically a relapse is not of dangerous omen. Among my private cases in which the subsequent history has been known to me there were three instances of relapse. One was a child who sixteen years ago had two attacks within the same year and has had no return. The second was a man who suffered from a very severe form in 1879 and in 1881 had another, but since that date has had no return or any form of abdominal discomfort. The third was a young man who during 1888-9 had five attacks, in 1890 passed through typhoid fever and since the last attack of appendicitis has had no trouble of any kind referable to the abdomen. These cases were all treated with opium. The patient should be confined to bed and kept absolutely to slop diet—in fact, treated on the same lines as if suffering from typhoid fever. He should have hot applications to the abdomen, and from first to last should be rigorously kept from any form of aperient remedy. I have never seen any harm ensue from the bowels being confined for from seven to double that number of days. My plan has been to wait till the fall of temperature and then when scybalous masses are to be felt in the left iliac fossa to give a simple soap-and-water enema. Opium should be given from the first moment that diagnosis is possible. I prefer to administer it either in its solid form or as Dover's powder, the amount varying with the exigencies of the case, and I think that one is more likely to err from giving too little than from giving too much. In an ordinary case I give half a grain every four or six hours, and I have never seen harm ensue. It soothes the nervous system, renders the restraint of bed more endurable, relieves the pain which if untreated is often very great, promotes physiological rest of the part affected, and, in my opinion, promotes repair and restoration of the inflamed tissue. When I first commenced practice I used to combine belladonna with the opium, but soon gave up the use of the former drug, as I could find no material advantage in the combination and it had the disadvantage of making the throat dry and parched.

CASES OF SURGICAL TUBERCULOSIS TREATED BY KOCH'S NEW TUBERCULIN.

BY FREDERIC EVE, F.R.C.S. ENG.,

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THE following eight cases are examples of surgical tuberculosis under my care at the Evelina Hospital in which the treatment by Koch's new tuberculin[1] (tuberculin R) has been completed, or nearly so. The first three cases of tuberculous disease of joints without sinuses or evidence of softening of caseous material show the only favourable results. Cases 2 and 3 were examples of early tuberculosis of the elbow and hip respectively. Of these it may fairly be said that the same results might have been anticipated from "surgical rest" and improved diet &c. In Case 1—a patient with relapsing tuberculosis of the knee of four years' duration—it seems probable that the remedy exercised a favourable influence. Case 5 was an instance of tuberculous peritonitis with ascites which was treated immediately after admission by laparotomy. During the administration of the tuberculin there was no re-accumulation of the fluid, but the child continuously lost weight. It was necessary to give the tuberculin very slowly and gradually owing to the weakly condition of the child and to avoid pyrexia; so that at the date of writing the treatment is only just completed. The remaining four cases were all examples of tuberculosis with sinuses. These, with one possible exception, were absolutely uninfluenced by treatment. The sinuses did not heal, and in three instances operation was ultimately required. Case 7, that of a child with tuberculous teno-synovitis of the dorsum of the hand, seems clearly to show that no immunity to tuberculosis was established by the treatment. The tuberculous material had become caseous and broken down with sinus formation, but was not, in the ordinary acceptance of the term, septic. After the conclusion of the tuberculin course all the tuberculous material was freely and carefully removed by operation, no bone disease being found. The wound healed by first intention, but two or three weeks later recrudescence occurred in the scar and subjacent tissues. The exception mentioned above was a patient with tuberculous epididymitis. A sinus remained after the opening of an abscess at the London Hospital just previously to admission to the Evelina Hospital. The sinus healed during the administration of tuberculin.

My own personal impressions[2] of the results of the new remedy may be summed up as follows. Some slight although no markedly favourable influence may be exerted in cases of early tuberculosis of joints or in those in which no evidence of softening of caseous material exists. But the effect where caseous material has broken down, and especially if the disease has become septic, is negative. The subsequent course of the cases described below will be carefully watched.

It cannot be said that the new remedy is altogether free from the drawbacks possessed by the old tuberculin of producing pyrexia and constitutional disturbance. In nearly

[1] Professor Koch's original article announcing the remedy appeared in the Deutsche Medicinische Wochenschrift, April 1st, 1897.

[2] My experience is not confined to the cases here recorded, but I have watched several other cases in which the treatment has not been completed and some under the care of my colleagues in which the course was completed.

every case a considerable rise of temperature occurred after one or two milligramme doses had been reached, and sometimes before. After this the duplication of successive doses, recommended by Koch, had to be given up for a more gradual increase. The pyrexia in some cases was very great, amounting to a rise of 7° F. Other unpleasant symptoms follow the administration of larger doses, such as vomiting, malaise, headache, and prostration. No local reaction was observed. In several instances abscesses formed at the seat of injection, although strict antiseptic precautions were enjoined. The number of these may in a measure be explained by the fact that during the progress of the trial we had several changes of resident officers. I am much indebted to our registrar, Dr. O. K. Williamson, for the following abstract of the notes of the cases; also to Miss Getz for the great help she afforded us in the administration of the remedy.

CASE 1. *Tuberculosis of the knee joint.*—A girl, aged seven and a half years, was admitted to hospital on May 15th for a tuberculous knee. It was stated that the left knee became swollen and painful after a fall four years previously. Since then the swelling had increased. About a year before admission the knee became bent; it was straightened at the Dover Hospital and the limb was put in plaster-of-Paris. There were marked wasting of the left leg and swelling of the knee. The synovial membrane generally was much thickened and pulpy. Movements were extremely limited, but there was no displacement of the bones. On May 16th tuberculin ($\frac{1}{10}$ milligramme) was injected. Sixteen doses in all were injected. The dose was doubled each time until 16 milligrammes was the amount reached; after this the dose administered was always 20 milligrammes. The injections were given at intervals of two days until $\frac{1}{2}$ milligramme was the amount reached. The intervals were then increased. Two doses of 20 milligrammes were injected. Sixty-four days was the period of time over which the injections were continued. As the result of the injections there was no local reaction. No marked rise of temperature took place until the dose of tuberculin had reached 4 milligrammes. The temperature on the evening after injection rose to 102° F. (a rise of nearly three degrees). The day after the injection of 8 milligrammes the temperature rose to 101·2° (two degrees rise). The day when 16 milligrammes were injected the temperature rose to 103·2° (from normal). The day after the first injection of 20 milligrammes the temperature rose to 101·2°, and on the day of the second injection the temperature rose to 101° (two degrees rise). After the injection of 16 milligrammes the child was very sick once. After the first injection of 20 milligrammes the child vomited several times, the face was pale, and she complained of headache; after the second injection of 20 milligrammes she was again sick and the face was very pale. On May 17th the knee was put up in a Macintyre's splint, in which it remained until June 25th. On June 24th the knee measured above the patella 8$\frac{3}{4}$ in. in circumference. On July 30th the measurement was found to be 8$\frac{3}{4}$ in. There was no apparent thickening of the synovial membrane, except slight fulness at the lower part of the patella on each side. The patella was found to be fixed, there was no movement in the joint, and no pain on percussion or palpation. The child was sent to a convalescent home wearing a moulded leather splint.

Remarks.—In this case the disease was well established, being of four years' duration, but no softening had taken place. The improvement was undoubted, but lapse of time must show if a permanent cure has been obtained. It is impossible to estimate in what measure respectively the improvement was due to rest, abundant diet, and nursing for seventy-six days, or to the tuberculin. Seeing that the disease was of such duration and that the joint had been treated at a seaside hospital I should be inclined to ascribe a large share of credit to the injections.

CASE 2. *Tuberculous disease of the elbow.*—A girl, aged four years, was admitted on April 21st for tuberculous disease of the elbow joint (right). About September, 1896, the mother observed after the child had had a fall that she could not straighten her arm and that the elbow was swollen. There was very little movement in the joint; it could not be extended to more than 120° or flexed beyond a right angle; rotation also was very much limited. The joint felt generally thickened. There was a distinct pulpy swelling in the neighbourhood of the radial articulation. An angular splint was applied. The child was healthy in appearance and well nourished. On May 8th $\frac{1}{10}$ milligramme of tuberculin was injected. Eighteen doses in all were administered. The dose was doubled until 15 milligrammes were reached; four doses of 20 milligrammes were then successively given. The interval between successive doses was two days until 2 milligrammes were reached. There were then intervals of four days and three days until 8 milligrammes were reached. The intervals after this varied from eight to eleven days. Seventy-two days was the period of time over which the injections were given. As the result of the injections there was no marked rise of temperature until 15 milligrammes were injected. After this there was a rise on the same evening to 102° F. (about four degrees). After the first injection of 20 milligrammes there was similarly a rise of temperature to 101·2° (from 97°). A rise occurred after the second injection of 20 milligrammes to 102° from 97·4°; and after the third injection there was an almost exactly similar rise of temperature. The day after the last injection there was a rise to 100·6° from normal. After the second injection of 20 milligrammes an abscess was observed at the seat of injection on the left side of the abdomen. The patient had been fretful in the night and had vomited once. After the third injection she had profuse sweats over the head and face. These were the only effects observed. On May 27th the circumference of the elbow taken round the groove on the front of the elbow and over the point of the olecranon with the elbow at right angles was 6$\frac{7}{8}$ in. On Aug. 6th the circumference was found to be 6$\frac{3}{8}$ in., and the pulpy swelling had disappeared. The loss of mobility remained practically the same, but there was neither the slightest pain or movement nor tenderness. The child's general condition on leaving the hospital appeared to be thoroughly sound; she was very fat. The arm was put up in plaster bandages. The progress of this case of early tuberculous disease was in every way satisfactory.

CASE 3. *Hip joint disease.*—A boy, aged five years, was admitted with hip disease (left) on April 21st. The boy limped and complained of pain on walking. The limping was noticed a week after he fell from a seat in March last. There was some fulness in the left groin, and very little movement in the joint could be obtained. The boy was well nourished. On April 24th weight extension (4 lb.) was applied; on May 13th this was stopped and a double Thomas's splint was applied. On May 7th $\frac{1}{100}$ milligramme was injected. Eighteen doses in all were injected. The second dose was $\frac{2}{100}$ milligramme; the dose was then doubled each time until 15 milligrammes were reached; after this four successive doses of 20 milligrammes were administered. Seventy-three days was the period of time over which the injections were continued. The interval between successive doses was usually two days until 2 milligrammes was the amount reached. The intervals after this were in order four, three, eight, eight, eight, eleven, and ten days. As the result of the injections there was no marked rise of temperature until $\frac{1}{4}$ milligramme was injected. On the evening after this there was a rise of temperature to 100·4° F. (from 97°). The next marked rise of temperature was after the injection of 2 milligrammes. The day after this the temperature rose to 100° (from normal). Again, the day after the injection of 4 milligrammes the temperature rose to 99·8° (from 97°). After the injection of 8 milligrammes there was a rise next morning to 103·8° (from 97°); and after the injection of 15 milligrammes there was a rise to 105·6° (from 97·8°). After the first injection of 20 milligrammes there was a rise of temperature to 103·8° (from 96·4°), after the second injection a rise from 97° to 103°, after the third injection a rise from 97° to 103·6°, and after the fourth injection a rise from normal to 103·2°. After the injection of 15 milligrammes he was sick several times, slept very little, the face and hands were occasionally cold, and he had profuse general sweats. After the first injection of 20 milligrammes he vomited a few times; after the second injection he vomited three times, his face was pale and he complained of pain in the abdomen; after the third injection he had similar symptoms, and after the fourth injection he was once sick. On July 9th there was still some fulness in the left groin. The joint admitted of a certain amount of movement without pain, especially flexion. The thigh could be flexed to an angle of 40° with the horizontal. The boy left the hospital on a double Thomas's splint.

Remarks.—In this case it may be said that the same amount of improvement would have followed "rest" and general

treatment in a large proportion of cases of disease of the hip-joint.

CASE 4. *Caries of the tarsus.*—A girl, aged six years, was admitted to hospital on Feb. 13th for a sinus discharging thin serous pus on the anterior surface of the left foot. Two and a half years ago the child went into the Forest Gate Infirmary with wasting. She was discharged in August, 1896, apparently well, with the exception of a discharging sore on the left foot. Since Christmas wasting and night sweats had been present. The sinus led to carious bone. The dorsum was swollen and pulpy. On March 12th the scaphoid, cuneiform bones, and cuboid were removed by two incisions on the outer and inner sides of the dorsum of the foot respectively. The bones of the foot were then brought together by means of deep catgut sutures, the wound was dressed with cyanide gauze, and the foot was placed in plaster splints. On admission there was also a large indurated swelling in the right lumbar region with a lateral curvature to the right. On April 6th, of the two granulating wounds on the dorsum and external surface of the foot respectively the outer one had healed and the inner had not. On the 28th a small abscess in the groin (right) was opened. At this date the wound in the foot was nearly healed, but one corner was rather inclined to break down. The child was thin and rather pale. On May 8th $\frac{1}{30}$ milligramme of tuberculin was injected. Eighteen doses in all were injected. The particulars with regard to the doses and the intervals between successive doses were precisely the same as in Case 6. As the result of the injections the temperature was not observed to rise until 1 milligramme had been injected. On the evening after this there was a rise from 97·4° to 101° F. On the day of injection of 8 milligrammes there was a rise from 97° to 101·4°. On the day of injection of 15 milligrammes there was a rise from normal to 104°. On the day of the first injection of 20 milligrammes there was a rise of temperature from normal to 103°; on the day of the second injection of 20 milligrammes there was a similar rise; on the day of the third injection of 20 milligrammes there was a rise of temperature from normal to 101·2°; and on the day of the last injection there was a rise of temperature from normal to 102·4°. After the injection of 15 milligrammes inflammation was observed at the seat of injection, she slept badly, complained of headache, and vomited several times. After the first injection of 20 milligrammes her face was pale and she vomited once. An abscess formed at the seat of injection. After the second injection of 20 milligrammes she vomited several times; after the third and fourth injections there was, however, no sickness. On July 2nd, after having had two injections of tuberculin of 20 milligrammes, the sinuses in the foot were scraped with a sharp spoon and some softened bone removed. The sinus in the right groin was opened and scraped. The edges of the wound were brought together with silkworm gut.

Remarks.—The local disease was apparently uninfluenced by the tuberculin. The child was sent to a convalescent home with a sinus still open on the dorsum of the foot.

CASE 5. *Tuberculous peritonitis (ascitic variety).*—A female infant, aged seventeen months, was admitted on May 14th. The abdomen was greatly distended, with bulging in the flanks, and very tense; a fluid thrill was easily obtained. The child was plump and looked healthy; her colour was good. On June 3rd laparotomy was performed. Much serous fluid was let out from the peritoneal cavity and the peritoneum was found to be studded with tubercles. The operation wound healed well. On June 8th $\frac{1}{30}$ milligramme tuberculin was injected. The dose was very gradually increased, the full 20 milligrammes not being reached until September. The child had lost 4 lb. 4 oz. since admission and looked pale. Distinct nodules were to be felt in the neighbourhood of the wound, but there was little if any reaccumulation of fluid. This patient was transferred to me for surgical treatment by my colleague, Dr. Willcocks.

CASE 6. *Tuberculous dactylitis.*—A girl, aged ten years, was admitted to hospital on April 24th for tuberculous dactylitis. There was thickening of the first phalanx of the ring finger of the left hand, the tissues over the thickened part were inflamed, and there was a large fungating ulcer on the posterior and ulnar surface of the finger. The patient's general condition was good. The forearm and hand were put up in an anterior splint. On May 8th $\frac{1}{30}$ milligramme of tuberculin was injected; eighteen doses in all were administered. The dose was doubled each time of injection until 16 milligrammes was the amount injected. The next dose was 20 milligrammes, and the dose thenceforward was kept at this. The injections were given at intervals of two days until the dose of 2 milligrammes was reached; there was a four days' interval between the injections of 2 and 4 milligrammes; three days between the injections of 4 and 8 milligrammes; seven days between the injections of 8 and 16 milligrammes; and nine days between the injections of 16 and 20 milligrammes. After this the intervals varied from eight to eleven days. The last dose was on July 19th. Seventy-two days was the period of time over which the injections were continued. Four doses of 20 milligrammes each were injected. The temperature did not rise until $\frac{1}{2}$ milligramme was injected. The same day it rose to 101° F. (from 98·4°). The day after 4 milligrammes were injected the temperature rose to 102·2°, after 8 milligrammes to 102°, whilst the same day that 16 milligrammes were injected it rose to 104·6°. On the day of the first injection of 20 milligrammes the temperature rose to 103·8°, on the day of the second injection of 20 milligrammes to 105·6°, on the night after the third injection to 103°, and on the day of the fourth injection to 102·4°. After the injection of 8 milligrammes an abscess was observed at the seat of injection, with inflammation around it. After the injection of 16 milligrammes headache was observed coincidently with the rise of temperature. There were also redness and great tenderness at the seat of injection, and the patient was sick afterwards. After the first injection of 20 milligrammes the hands and face were observed to be cold coincidently with the rise of temperature. After the second injection she complained of headache, the face was very pale, and she was sick once, coincidently with a rise of temperature. On July 30th an operation was performed. An incision was made over the dorsum of the first phalanx, and a sinus was found leading into the interior of the shaft of the bone. Neither joint was affected. On the external surface of the ligaments of the first interphalangeal joint some recent tuberculous granulation tissue was found. The interior of the thickened shaft of the first phalanx was filled with diffluent caseous material. The operation wound healed *per primam*.

Remarks.—Soon after the commencement of the injections the ulcer partially healed and the swelling of the soft parts of the finger diminished. This may have been due to careful antiseptic dressing, rest, and improved diet. Subsequently the condition of the finger became stationary.

CASE 7. *Tuberculous teno-synovitis.*—A boy, aged eight years, was admitted on June 1st for tuberculous disease of the dorsum of the hand, which had been affected on and off for three or four years, but had become worse lately. There was considerable thickening over the fourth metacarpal bone of the left hand, and some ulceration of the skin. The first phalanx of the ring finger was also considerably thickened, and there was a discharging sinus in the palm. The boy was delicate in appearance and decidedly thin. A palmar splint was applied. On June 4th $\frac{1}{30}$ milligramme of tuberculin was injected. Fourteen doses in all were administered, the dose being doubled each time until 16 milligrammes were reached. The injections were made at intervals of two days until $\frac{1}{10}$ milligramme was reached. Then intervals of from three to eleven days were allowed to intervene until 2 milligrammes were injected; then intervals of two days until 16 milligrammes was the amount reached. This was arrived at on July 31st. Fifty-seven days was the period of time over which the injections were continued. As the result of the injection a rise of temperature to 103° F. was observed the day after $\frac{1}{15}$ milligramme was injected (nearly three degrees rise). The day of injection of $\frac{1}{10}$ milligramme the temperature rose to 102° (about three degrees). The next occurrence of marked rise of temperature was on the day after $\frac{1}{2}$ milligramme was injected, when there was a rise to 102·2° (about four degrees). The day after injection of $\frac{1}{4}$ milligramme there was a rise of temperature to 102·8° (about five degrees), the day after injection of 1 milligramme there was a rise of about four degrees, after 2 milligrammes to 102·2° (about three degrees), the next important rise being after 16 milligrammes to 104° (from normal). No other effects were observed. On July 30th the swelling on the dorsum of the hand was incised and found to contain diffluent caseous material connected with tendon sheaths but not with bone. A communication existed with the ulcer on the palmar surface.

Remarks.—Primary union took place; but from two to

three weeks later the scar became tuberculous and broke down. As the result of treatment the swelling rather increased and the skin over the tuberculous granulation tissue broke down at several points. Two sinuses existed when the child came under observation, but there was practically no suppuration.

CASE 8. *Tuberculous epididymitis.*—A boy, aged ten years, was admitted to hospital with tuberculosis of the epididymis on June 7th. There was a sinus on the left side of the scrotum, the skin around which was adherent to the left testicle. The sinus discharged serous fluid. Marked thickening of the epididymis existed, but the vas was normal. The boy, although thin, looked healthy. Previously to admission at the Evelina Hospital an abscess connected with the left testicle was incised at the London Hospital and the sinus remained. On June 8th $\frac{1}{100}$ milligramme of tuberculin was injected. Nine doses in all were administered. The dose was doubled on each occasion the largest dose reached being $\frac{1}{2}$ milligramme. Forty-three days was the period of time over which the injections were continued. As the result of the injection the first marked rise of temperature was on the day after the injection of $\frac{1}{125}$ milligramme, when it rose from normal to 100·8° F., the next rise being after the injection of $\frac{1}{30}$ milligramme, when it rose from normal to 100·6°. The remaining injections caused apparently no rise of temperature. After the injection of $\frac{1}{30}$ milligramme redness and tenderness were observed at the seat of injection. The sinus healed and the patient was then discharged.

Harley-street, W.

A CASE OF ULCERATIVE ENDOCARDITIS SUCCESSFULLY TREATED WITH ANTI-STREPTOCOCCIC SERUM.

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A FEMALE, aged twenty years, was admitted into Guy's Hospital under my care on Jan. 26th, 1897, complaining of pains in the joints and general malaise. Her father was stated to have died from phthisis and heart disease; otherwise the family history was good. Her occupation was that of a ward maid. She had hitherto enjoyed good health, never having been laid up. The present illness began four days previously with pains in the joints, headache, and shivering. On admission she was found to be a well-nourished, healthy looking young woman. She complained of headache and of pains in the knee and thigh. The heart, lungs, and urine were quite normal and there was no swelling or other evidence of disease in any of the joints. The temperature was 100·6° F., the respirations were 24, and the pulse was 104. On Jan. 27th the temperature, which was taken every four hours throughout the illness, became normal, and remained so for three days. I hoped that she was convalescent, having considered the attack to be one of influenza, but on Jan. 30th the temperature again rose, and from this date until March 16th she suffered from irregular pyrexia. With the exception of three days the temperature rose for a few hours every day to 102°, 103°, or even 105°, and there were frequent rigors and perspirations. During the whole of this period she was carefully examined every day. The heart, lungs, urine, ears, eyes, vagina, and rectum appeared to be perfectly normal. The pulse varied with the temperature, when the latter was normal the pulse-rate was 80 or 90 per minute. The blood showed slight leucocytosis and slight decrease in hæmoglobin. Some carious teeth were removed, but there was no sign of inflammation in the alveoli. She suffered a good deal from constipation, requiring the frequent use of aperients. In spite of treatment with quinine and salicylate of soda she gradually became worse; the rigors were more frequent, she lost her appetite, and became pale and thin. On March 16th a distinct diastolic bruit developed on the left side of the sternum, its maximum point of intensity being the third intercostal space. It was then quite clear that the pulmonary valve was affected and that the patient was suffering from ulcerative endocarditis. On March 24th anti-streptococcic serum was first injected, and, with the exception of three days, the injections were continued daily until May 25th. The serum employed was that of the British Institute of Preventive Medicine, and it was given in doses of 20 c.c until the last two weeks of treatment, when the dose was gradually diminished. The treatment lasted altogether nine weeks, during which time 1030 c.c. serum were injected in fifty-nine doses. The effect of the treatment is best shown by the chart, which is, unfortunately, too long for publication. During the first fortnight of treatment there were only two slight rigors, but the pyrexia persisted. On April 6th, a fortnight after the commencement of the treatment, the temperature became normal and remained so until the 26th. By this time the patient was so well that the injections were ordered to be given every other day instead of daily. The effect of this alteration in treatment was that the temperature rose on the 28th to 99.6°, on the 30th to 100·4°, and on May 3rd to 100·6°. The injections were again given daily, with the result that the temperature fell to normal on May 6th, and continued so until July 19th, when the patient was discharged from the hospital. On May 13th the dose of serum had been reduced to 10 c.c., and on the 22nd to 5 c.c. On the 25th the injections were omitted. The general condition of the patient began to improve five or six days after the commencement of the injections, and three weeks later she was to all appearances quite well. On leaving the hospital on July 19th the diastolic bruit in the pulmonary region was still present. Neither now nor on any previous occasion did the heart show any sign of enlargement. The only inconveniences noticed from the frequent injections of the serum were slight pain at the site of injection and an urticarial rash, which appeared on April 1st and lasted a few days. After leaving the hospital the patient went to a convalescent home. She was seen a month later, and appeared to be in perfect health, but the bruit still persisted.

Remarks.—Cases of ulcerative endocarditis treated with serum have been recorded in THE LANCET by Dr. Harrington Sainsbury,[1] Dr. A. E. W. Fox,[2] and Dr. Margaret Pearse.[3] The above case appears to be more definite in its nature and in the result of the treatment than any of these cases. The patient came under observation a few days after the commencement of the illness. During the first seven weeks she suffered from an ill-defined septicæmia without any local manifestation of disease, and there was at no time distinct evidence of the site of entrance of the contagion. Up to the time when the serum was first injected she was progressively losing ground; and a few days before the commencement of the injection, the pulmonary valve became affected. The result of the treatment was most striking and I am quite satisfied that it saved the patient's life. The pyrexia ceased after the first fortnight of treatment, and the general condition very quickly improved. At the end of five weeks the patient seemed so well that the injections were given every other day instead of daily. As a result of this alteration the temperature began to rise, but again subsided when the injections were given daily. During the last fortnight of the treatment the quantity of serum injected daily was gradually diminished, and after the final omission of the injections no further rise of temperature occurred. The patient with the exception of pulmonary regurgitation, was perfectly well on leaving the hospital and was seeking a situation a month later. The large amount of serum used is worthy of record. The treatment lasted nine weeks, during which time 1030 c.c. serum were injected in fifty-nine doses. The only ill-effect was a transient rash. Throughout the case the cardiac symptoms remained in the background, the infective process being the most prominent feature. Such a case as this is the most favourable for serum treatment. In so many cases of ulcerative endocarditis the infective process is engrafted upon old cardiac trouble, and even if the serum controls the septicæmia, the patient has still to contend against cardiac inefficiency. The antistreptococcic serum was used because it was thought that the case was most probably one of streptococcic infection, although we possessed no bacteriological evidence of the presence of streptococci in the blood.

Cavendish-place, W.

[1] THE LANCET, Oct. 17th, 1896, p. 1079.
[2] THE LANCET, Feb. 20th, 1897, p. 520.
[3] THE LANCET, July 10th, 1897, p. 92.

PARTIAL AND COMPLETE DISLOCATION OF THE SEMILUNAR CARTILAGE OF THE KNEE; OPERATION ON SIX CASES.

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THE mechanism of the knee-joint has always appeared to me to be one of the most interesting problems in anatomy, but one at the same time far from being satisfactorily explained. To call the knee simply a hinge-joint is quite an inadequate description, though true up to a certain point. It is a hinge undoubtedly, but a hinge with far more complex movements and limitations of movement than are suggested in the name. The difficulties in explaining the details of movement in the joint will probably never be entirely cleared up by anatomical studies on the dead body. So many changes take place after death in the tone of the muscles and in the tension of the ligaments when the capsule has been more or less completely removed that the normal movements within the joint are probably rarely or ever seen post mortem. But in the living subject the case is otherwise, and it is possible to examine many points which after death would probably be considerably altered.

Having operated on the knee-joint very fully in a great number of cases its internal anatomy *in vivo* is very familiar to me. And having lately opened it on six different occasions for the study and treatment of the very distressing condition due to displacement of a semilunar cartilage, I should like to place on record exactly what has been found as a small contribution to the anatomy of the joint as well as its pathology. The subject deserves a much wider study than would be possible in a paper such as the present.

The clinical history of these cases is the first factor in throwing light upon the mode of production of the injury and the movements of the semilunar cartilage. In the first place, in all the many cases which I have seen, besides those I have operated on, the displacement has been progressive—that is, it has been very slight at first and has gradually increased until complete. In the next it has, I believe, invariably been the internal meniscus which has been displaced. Out of many dozens of these cases which I have seen I cannot recall a single one in which the external cartilage was dislocated. And in all those I have operated on it was clearly seen that the internal was the part out of place. Again, by far the largest number of cases have been among males in my experience, and I have never yet been called upon to operate on a female. The condition has been usually seen among young and vigorous men, my oldest patient being forty-four years of age. This was the only case in which a severe injury appeared to have been the commencement of the lesion. Here (Case 2) the patient had severely twisted his knee by a fall out of a truck. But the ultimate dislocation probably did not take place upon this occasion, but the injury only prepared the way. In every case the history of the initial lesion was almost always identically the same. The patients were either walking quietly on the level, or, if we include cases not operated on, were slowly sauntering upstairs, getting out of a bath, mounting or dismounting from a bicycle or horse, and a slight catch was felt on the inner side of the joint. In all, the displacement occurred while the knee was very slightly flexed, and usually while there was very little muscular effort being put out. In one case, it is true, the patient was playing football when his knee "gave." Then there was a history in all cases of recurrent attacks like the first at ever-shortening intervals and each time with more severe symptoms. In some cases where the descriptions were particularly accurate the patients noted the "slipping out" to have occurred while the limb was not only slightly flexed, but at the same time the leg was rotated outwards on the thigh. This I believe to be the rule. In the less marked cases the first and second attacks left but little ill effects behind and extension was as good as before, but usually much swelling due to synovitis followed subsequent attacks and ultimately remained for a long time. In the severe cases verified later by operation there was a history of a very sharp attack after the first two or three milder ones, and after this there was inability to extend the knee fully, and usually permanent effusion. In none could any foreign body be felt in the knee, and any *palpable* evidence of the absence of the meniscus from its usual place was not discoverable by the finger. In the examination of the knee and remedy of the displacement the same operation was performed in every case.

With the limb extended a curved incision reaching from the inner border of the ligamentum patellæ to the anterior edge of the lateral ligament was first made. The ends of this incision in all cases corresponded to a line a little above the level of the upper rim of the tibia; the convexity of the flap reached down for about one inch on the head of the latter. The periosteum was raised with the flap, which also, of course, contained the capsule besides, but the fibres of the latter were left intact in their relation to the periosteum. This I believe to be most important for the subsequent strength of the joint. When this flap was raised the cartilaginous rim of the articular facet was in every case seen to be divested of its covering semilunar cartilage, and except in Cases 1 and 4 the latter could not be seen at all with the limb in the extended position. In these two cases the meniscus was seen to be detached only in the outer part of its periphery from the capsule, and to have slipped in more or less between the bones. But in neither case had it disappeared from view. But in the other four cases when the joint was opened as above no semilunar cartilage was to be seen at all with the knee extended. The flap turned up showed where it had been detached, but the meniscus itself had disappeared. But when the joint was flexed to about a right angle it became possible to see the loosened mass lying in the inter-condyloid notch against the crucial ligaments. In three out of the four in which it was found in this condition of complete inward dislocation it was only held by its extreme ends; in the last case there was still a trace of its capsular union anteriorly. In all these cases of entire dislocation inwards the reduction was effected by a pull forwards with a sharp hook, the knee being strongly flexed. And it was remarkable how strong the traction required to be in order to restore the meniscus to its proper position. It always came out with a slip suddenly, and the knee could then be fully extended. But quite as remarkable as the need of strong traction to bring it out was the tendency it had to return to the inter-condyloid notch when the knee was slightly flexed. It appeared to be dragged in suddenly during flexion, and if the hook were left loose it would carry it with it. This was so remarkable that I demonstrated it over and over again in more than one case to those present. It was easy to see in all these movements of the knee that in those cases in which the meniscus was rolled up in the middle of the joint nothing short of traction with a hook could have brought it into the normal position; but in Cases 1 and 4, where only part of the peripheral attachment had given way, replacement in slight flexion was quite easy.

From a study of these cases I have satisfied myself, therefore, that where I have been successful in reducing a semilunar cartilage by manipulation without opening the joint the dislocation must have been incomplete, and, indeed, comparatively trifling, only a part of the capsular attachment having been torn, or, perhaps, only stretched. The other cases (2, 3, 5, and 6) all showed that no manipulation or movement of the joint could ever have restored the meniscus to its original position. These six cases operated on showed the derangement of the joint in every stage when taken in the following order—1, 4, 6, 3, 5, and 2. Case 1 showed detachment of part of the periphery and very moderate displacement. Case 4 showed a wider separation of the meniscus from the capsule and greater displacement; the other cases all showed complete dislocation into the inter-condyloid notch. In Case 6 there was still, however, a trace of the capsular attachment left anteriorly, but in the rest the latter had quite given way and the cartilages were only held by their ends. But in Case 2, not only was this the case, but the meniscus, from long dislocation, had altered materially in shape and appeared corrugated so as to accommodate itself to its new position. I find, too, in the notes that it appeared to have contracted adhesion in its new position; and perhaps this was the case, but I suspect that the difficulty in drawing it out and in keeping it fixed during suture of its edge was more due to its being crumpled and perhaps shrunken somewhat. This fact of crumpling and shrinkage probably explains, too, the longer time taken by this patient to recover the free use of his knee than in any of the others. It will also doubtless explain the great amount

of effusion into the joint which took place in this case after operation, and which required aspiration of the synovium two or three times within the first few weeks. And even now, though the man is running about quite well at his work, and very cheerful about his leg, there is still some slight stiffness in moving the joint. Of course, this was the oldest patient of the series, and the dislocation was of longer standing than in the other cases, except Case 5, factors which no doubt told on convalescence and completeness of recovery. In the other cases of younger men in whom the condition had not, with the exception of Case 5, lasted so long, the recovery was more perfect, and the reaction in the joint after operation practically *nil*. In Case 5 there was considerable reaction and slow recovery of power. It happens that within the last few weeks I have heard from several sources of Case 1. This young officer is now in India and taking part in all the exercises of his profession and in athletics as if his knee had never been injured. Case 3 has been lost sight of, but the last note in the hospital record was, "Joint looks quite normal." Case 4 I have seen and heard of several times since operation. He is rejoicing in complete restoration of the joint. Case 5 is that of a young naval officer who is back at his work and able for it. There was a considerable swelling on the inner side of the joint when I last saw him nine months after operation and still some stiffness. He was then still nervous about using the limb to its fullest extent, but unnecessarily so.[1] In this case there was great displacement, and the condition had lasted for a considerable time, three years probably, as in Case 2. The consequence was much alteration in the meniscus while displaced. Case 6 is still under observation. His convalescence has been absolutely uneventful; there was no reaction at all in the joint after operation, and he is beginning free movement. In this case, though there was complete dislocation, I expect a more than usually good result for the operation was performed within three days of that attack which resulted in dislocation.[2]

It was very interesting to note in all these instances that the patients' statements that in many cases the joint "went out" during slight flexion and eversion were confirmed by observation of the movements of the semilunar cartilage during flexion and extension *in vivo*. On looking into the joint after reducing the meniscus the latter was always seen to move inwards during flexion. This was not merely a simple slipping inwards, but a dragging inwards, which could be felt when a hook was inserted in the meniscus itself; and in the cases in which the detachment was marked the cartilage was plainly dragged into the middle of the joint with the hook and with considerable force. Slight flexion began the movement, which seemed to increase the more the knee was bent, until finally the meniscus slipped over the convexity of the femur and got between the condyles and remained there.

Through the kindness of my colleague, Professor Thane, I have been able more than once lately to examine a number of variously dissected knee-joints, and in these, too, the movement of the cartilage backwards and inwards during flexion can be seen to a certain extent, but far less marked than in the living knee. But the mechanism of the movement is far from clear either in the dead or living joint. What *appears* to take place is this. In the first place during flexion the point of contact between the femur and tibia appears to shift backwards a little. This in itself would relieve the pressure on the anterior curve of the meniscus and push the posterior curve backwards. But in addition it would incline the internal lateral ligament somewhat backwards, and in this way drag the semilunar cartilage back through its attachment to the lateral ligament. Apparently one at least of the functions of the posterior crucial ligament is to prevent the femur from slipping too far backwards, for it is rendered tense in flexion. Whether this explanation of the causes of the displacement of the meniscus be correct or no the fact remains that during flexion in the living joint it can be seen to slip backwards. The actual dislocation, of course, is due to the nipping of its edge when the limb is extending, which fixes it between the two bones and prevents it travelling forwards, while the capsule, being rendered tense by extension, is torn away from it more and more until there is nothing to prevent it slipping into the middle of the joint. Whether when it has once been completely dislocated thus it ever returns to its normal position is, I think, doubtful. I imagine that in those cases in which it has been supposed to do so the dislocation has not been completely into the centre of the joint, but has been a partial nipping. The appearance of the meniscus in those cases in which I have seen it lying against the crucial ligaments was certainly such that its return without considerable traction appeared an impossibility. It was puckered, thickened, and apparently shrunken.

From all this it would appear that given a knee-joint in which this derangement has taken place incontestably and has been repeated an operation ought to be performed without delay so as to prevent the complete dislocation from taking place. If the latter has occurred there is the more reason for immediate interference before the semilunar cartilage becomes altered in shape and texture. In such cases the manipulations during operation must be more severe and the reaction thereafter more decided, while a complete *restitutio ad integrum* is much less likely owing to the changes in the cartilage and other structures of the joint. If the operation is not performed reasonably early there is a danger of the displaced cartilage being so seriously altered in texture and shape that it cannot be restored to position, and nothing remains but to excise it completely and leave the joint without an internal meniscus.

The following six consecutive cases form an interesting group.

CASE 1.—The patient, aged twenty-four years, while playing rackets in April, 1895, slipped, "and felt something go in his right knee." He had sharp pain, and the joint swelled up and he could not bend it. This swelling lasted a month, when he thought the cartilage must have gone back into position, for the swelling suddenly went down; but soon after he had a return of symptoms. He was then put in splints. Recovery again took place, but three weeks later the same "slip" occurred. He was then invalided. Since then he had put the knee out five times, and on each occasion swelling has followed. The operation was performed on Oct. 3rd, 1895, in the same manner as in the other cases. The cartilage was only partially separated from the capsule and was drawn out with a hook and stitched to the posterior surface of the flap raised. Three silk stitches were used, which at first tended to cut out of the cartilage. The wound was closed in the way described and dressed with salicylic wool. There was no drainage. Primary union took place with very slight synovitis.

CASE 2.—A man, aged forty-four years, had been always healthy and with a good family history. He strained his left knee a year previously in a fall from a truck. Three months later, while walking, he felt pain in the same knee, but after a few seconds he was able to put it straight again. Similar attacks had occurred every two or three weeks since. In October, 1895, he had a bad attack and was unable to straighten the limb for about three weeks, the joint at the same time being very much swollen. He was unable to walk for six weeks and three days; after he began to go about the knee locked as before and he was off work for five weeks. The patient was a robust and finely developed man; there was no enlargement of the joint and nothing otherwise abnormal about the knee to be felt. He was able to walk except when the cartilage was displaced. The operation was performed on Feb. 20th, 1896, in the same manner as the other cases. When the joint was opened the semilunar cartilage was found to be torn away from the capsule all round and to be curled up against the crucial ligaments in the intercondyloid notch, where it had contracted adhesions. When it was drawn into its normal position by means of a blunt hook with the knee slightly flexed it could be retained there by full extension of the joint, but upon the slightest flexion it slipped back into the old position, dragging the hook with it with some force. Six fine silk sutures were inserted through its outer border, and it was stitched to the flap of the capsule and periosteum as in the other cases. This flap was then sutured *in situ*, and the wound was closed without drainage. There was a good deal of pain in the joint next day, but this soon passed off. The first dressing was on the sixth day, when all the wound but its two ends was found united *per primam*. There was a good deal of fluid in the joint. On the tenth day the wound was perfectly healed and the fluid, consisting of yellow serum, was aspirated. Four days later the joint was again aspirated, as the fluid had re-accumulated to the extent of three ounces. About this time there was mild lymphangitis with tenderness up the thigh and in the groin. The wound, however, remained perfectly quiet. There was throughout retention of urine requiring

[1] Since this was written I have heard by letter from this patient from the Red Sea. He is now quite well.

[2] Since writing the above I have seen this patient. His joint is perfectly normal in every way, and he is able for every kind of exercise.

the catheter. Either owing to the lymphangitis, or perhaps the retention, the temperature was raised for fifteen days, on one occasion to 102·2° F. It then fell, and convalescence was uninterrupted further. Under massage the swelling of the joint improved much before the patient was discharged on April 4th. I have since seen him several times. He is now at work and with a good knee. There is slight limitation of extreme flexion and a trace of swelling. Otherwise nothing is to be noticed, and he expresses much satisfaction with the result.

CASE 3.—A man, aged thirty-eight years, had always been healthy and had a good family history except that his father died from "consumption." In January, 1896, he felt the left knee "give" while walking quietly. After this the joint swelled and he used a liniment. At the end of a fortnight he could get about without any abnormal sensation in the joint except the "slipping of something" occasionally, but the swelling remained with pain and throbbing and an occasional crack for a time. When seen there was no pain, but the joint was somewhat enlarged with fluid. Flexion produced no pain. The operation was performed on May 1st, 1896, in the same manner as in the other cases. Here, too, the semilunar cartilage was found to have completely slipped into the inter-condyloid notch, from which it could only be drawn out into position by means of a hook and retained by full extension of the joint. When the latter was slightly flexed it at once suddenly slipped back to the crucial ligaments. It was fixed by four silk sutures *in situ*, and the wound was closed without drainage. There was much pain during the following night and little sleep. This lasted for a day or two, being most marked at night. On the sixth day the first dressing was changed and union *per primam* was found, the joint looking quite normal. Collodion and wool were applied. The skin stitches were removed on the ninth day, and the knee was massaged daily. He left the hospital on June 6th quite well. The temperature on the first and second days rose to 100·2° F., and then fell to practically normal. Convalescence was uninterrupted. I have not seen or heard of the patient since his discharge.

CASE 4.—A man, aged forty years, had always been healthy and very active. While playing football four months previously he felt his left knee give way under him while he was kicking the ball with his right foot. At the same moment he felt something slip in the joint, which was followed by great pain. He was compelled to rest for a month, and was then able to use the leg as before, but it was weak. A fortnight later he felt the same twist while bowling at cricket, but less severely than the first. Notwithstanding, in spite of keeping his bed for fourteen days, recovery was not so rapid and complete as before. A week before admission to University College Hospital, on June 23rd, 1896, exactly the same accident happened to his knee while leaning forward on a prop fixed in the ground. Since then he had kept his bed. On admission the knee was kept slightly flexed with a slight degree of rotation outwards. Flexion produced no pain. There was slight wasting of the thigh. The operation took place on July 2nd, 1896. The semilunar cartilage was only separated from the capsule at its posterior and inner aspect, and only slightly displaced inwards. Similar sutures and dressing to those in the other cases were used, and there was no drainage. The temperature rose gradually day by day to 101·2° F. on the seventh day, and then gradually fell to normal. Healing took place *per primam* except at one point, where one of the deep silk ligatures projected a little. The patient went home on July 31st. He returned to show himself some weeks later. He was walking well and was very cheerful about himself. One of the deep ligatures was seen projecting from a moist spot in the scar. This I removed. I have seen the patient since quite well and with a perfectly sound knee.

CASE 5.—A young naval officer had the usual history of several more or of less severe attacks in the right knee which had commenced three years before. The knee was slightly flexed and could not be extended fully, but there was not much pain and only trifling thickening round the joint. Nothing abnormal could be felt on the borders of the joint. On April 16th, 1896, I operated as before described and found the massive semilunar cartilage lying, bent and twisted, between the condyles. When drawn out with a hook it showed the greatest tendency to recoil to its old vicious position, and, in fact, did so when the hook was left to itself. This was so remarkable that I asked my friend, Dr. Dudley Buxton, who was giving chloroform, and who had seen my other cases, to come round from the patient's head and look at it. The meniscus was stitched in position, as in the other cases, and the wound closed without drainage. The wound healed *per primam*, but there was some effusion into the joint which absorbed slowly. When seen last Christmas there was still slight stiffness, but relief was otherwise complete. He is now abroad and quite well.

CASE 6.—A healthy young man, aged twenty-one years, first noticed a sharp click in his right knee while vaulting over a bar three years ago. There was pain at the same time, but this soon passed off. He experienced the same sensation shortly after. Finally, on May 2nd, 1897, two days before admission, while playing in a field and starting to run, his knee suddenly gave out, and he found he could not extend it easily or walk with any comfort. He was obliged to keep it somewhat flexed. On admission he complained of inability to extend the right knee, which was kept in a state of flexion, but could be moved in greater flexion without pain. There was no swelling of the joint, and nothing abnormal could be felt. On May 4th I operated precisely as in the other cases, and found the meniscus curled up in the inter-condyloid notch torn from its capsular attachments, except just at its anterior curve. It was reduced in flexion with a hook, and the rest of the operation was soon finished. There was absolutely no reaction in the joint, and when the superficial sutures were removed on the twelfth day primary union was complete.

Harley-street, W.

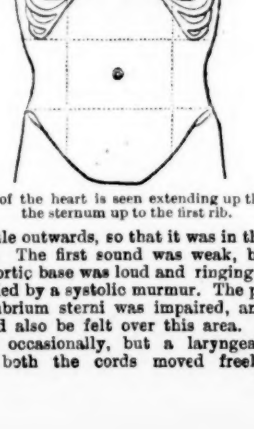
THE ROENTGEN RAYS IN MEDICAL DIAGNOSIS.

BY H. CAMPBELL THOMSON, M.D., M.R.C.P. LOND.,
MEDICAL REGISTRAR TO THE MIDDLESEX HOSPITAL.

THE following cases are of some interest in showing the value of the Roentgen rays in medical diagnosis. In all of them the fluorescent screen was used, as it is more certain and far less tedious than photography for making examinations of the chest. The diagrams show the appearances of the cases as seen upon the screen; the ribs and sternum, which in reality appear dark, have been left clear in the diagrams in order to avoid confusion.

CASE 1.—A man, aged forty-nine years, was admitted into the Middlesex Hospital complaining of paroxysmal attacks of pain in the chest which had occurred on and off for the past five years. On admission the physical signs were as follow: the apex beat of the heart was in the fifth interspace, but

FIG. 1.



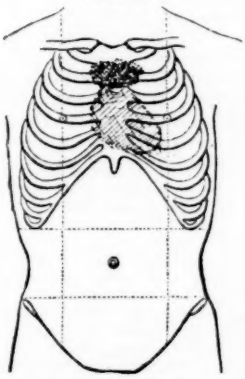
The shadow of the heart is seen extending up the left side of the sternum up to the first rib.

displaced a little outwards, so that it was in the vertical line of the nipple. The first sound was weak, but the second sound at the aortic base was loud and ringing in quality and was accompanied by a systolic murmur. The percussion note over the manubrium sterni was impaired, and some slight pulsation could also be felt over this area. The voice was rather hoarse occasionally, but a laryngeal examination showed that both the cords moved freely. Over the

upper part of the chest the veins were rather large. Dr. Coupland, under whose care the patient was, suspected the possibility of an aneurysm, and the patient was then examined by the Roentgen rays and a fluorescent screen. The result showed clearly that there was some enlargement of the first part of the aorta, and from the shape it seemed to indicate that the enlargement was fusiform rather than saccular. The appearance is seen in Fig. 1, which shows that the shadow of the heart, instead of terminating at its base in the usual way, has its left border prolonged upwards along the left side of the sternum.

CASE 2.—This case was kindly brought to me by Sir Richard Douglas-Powell. The patient complained of pain in the chest with paroxysmal attacks of coughing and dyspnœa. Physical examination showed that there was a dull area over the upper part of the sternum. Examination by the Roentgen rays showed a shadow corresponding to this area of dulness (Fig. 2). The shadow was not very well marked and its

FIG. 2.

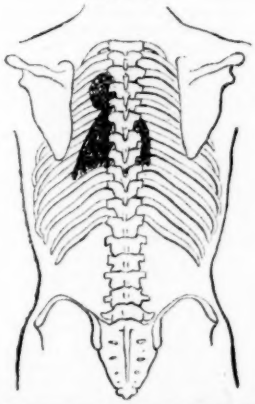


Showing the somewhat indefinite shadow at the level of the second ribs.

outlines were irregular, but it was quite distinct. From its appearance and the various symptoms it was thought that there might be a mediastinal abscess, but subsequent events have made it probable that it is an aneurysm.

CASE 3.—This was a case of aneurysm which I saw on three different occasions with Dr. Bezly Thorne. The patient, a man, aged forty-two years, had signs and symptoms of an aneurysm situated probably in the third part of the arch of

FIG. 3.

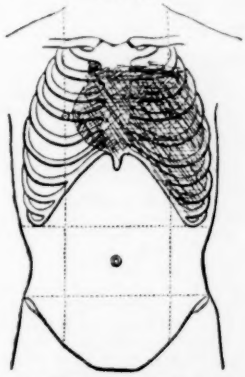


The shadow of the aneurysm is seen above the heart on the left side extending from the third to the fifth dorsal vertebra.

the aorta. The principal symptoms were pain, pulsation to the left of the heart in front, and paralysis of one vocal cord. On examination by the rays the posterior view showed the aneurysm very plainly. The shadow was very definite, situated above the shadow of the heart, and its outer border was sharply defined by a well-marked convex border. When viewed from the anterior the appearances were not so plain, but an ill-defined shadow could be seen which was continuous with that formed by the heart. The appearances of the aneurysm are shown in Fig. 3. This case was shown by Dr. Bezly Thorne at the Clinical Society on Feb. 26th, 1897.[1]

CASE 4.—This case, which was kindly brought to me by Dr. Biss, shows the appearance of a new growth in the chest which had displaced the heart. The patient had been under Dr. Biss's observation for a long time, and the symptoms and physical signs made it probable that the condition was that of a new growth complicated by some pleural effusion, though at one time the possibilities of an aneurysm had also been considered. The patient's chest had been tapped twice; the first time some fluid was drawn off, but at the second operation, which was performed a few days before she was examined by the rays, no fluid was obtained. On examining the patient with the rays and a fluorescent screen the left side of the chest was seen to be quite dark as high up as the second rib. Above this level there was a lighter area, but not so light as normally should be, evidently corresponding to the apex of the left lung. The heart was very much displaced; its convex right border was well marked and at one spot reached almost to the nipple line. The origin of the aorta, displaced a good deal to the right of the sternum, was also well seen, and its pulsations were distinctly visible (Fig. 4).

FIG. 4.



Showing the dark shadow of the left side of the chest with displacement of heart and aorta to the right.

I also saw several cases with Dr. Chapman of which I have unfortunately not preserved diagrams. Of course, in all such cases a positive result is of greater value than a negative one, as it may always be said that the aneurysm is either too small or situated in such a position that it did not show, but at the same time when a patient complains of thoracic symptoms and physical signs prove nothing it is in many cases a useful corroboration to know that the Roentgen rays show nothing also, and such a result has in several cases further strengthened the diagnosis.

Queen Anne-street, W.

LACERATIONS OF THE OS UTERI, VAGINA, AND PERINEUM IN SYPHILITIC WOMEN.

BY JOHN A. SHAW-MACKENZIE, M.D. LOND.

MRS. BOYD'S letter in THE LANCET of March 27th, while emphasising the fact that pneumonia is not unfrequently met with in syphilitics, introduces a point which has attracted my attention. I refer to the fact that in women obviously syphilitic, or whose husbands have suffered from syphilis previously to marriage, lacerations of the os, vagina, and perineum are not unfrequent. Such accidents, including uterine rupture, are probably more than coincidences, and

[1] Vide THE LANCET, March 6th, 1897.

syphilis may possibly account for such when the accoucheur is in no way to blame. The following cases I have noted.

CASE 1.—A woman, aged thirty-nine years, complained of pelvic pain and backache. She had suffered from discharge for twelve months. She had had eight children; five had died, and there had been three still births and one abortion. She was suffering from prolapsed uterus; the perineum was absent, and she stated that forceps were used in one of her confinements. The pharynx was ulcerated.

CASE 2.—This patient three years ago had a bad confinement and the perineum was torn. She made a tedious recovery, the lochia lasting five weeks. During her pregnancy the hair fell out and she had suffered from ulcerated throat since. The uterus was prolapsed.

CASE 3.—This patient, aged thirty years, suffered from falling womb and discharge since the birth of a child ten years ago. There had been two live births and two abortions. She is subject to sore-throats and the pharynx is ulcerated. The vaginal mucous membrane shows a hyperæmic, patchy, measly condition. The lips of the urethra are in a purple, swollen condition. The perineum shows the cicatrix of previous repair, but is thin and papery, and the uterus is prolapsed.

CASE 4.—This patient, aged forty-five years, had been married twenty-six years. Her husband died from hemiplegia some years ago. One child was born twenty-five years ago, but died in infancy. The patient is now out of health, is suffering from menorrhagia, erosion of the os, profuse leucorrhœa, excoriation of the vagina, prolapse of the uterus, and ulcerated tags of previous rupture of the perineum.

CASE 5.—This patient had been married twice. Her first husband died from cerebral trouble. By him she had four children and one abortion. In three months from the second marriage abortion occurred, followed by eruption on the skin attributed to fish diet. The pharynx and tonsils are now excoriated and the voice is hoarse, while there is scattered acne on the back. Perineorrhaphy was performed after her first confinement.

CASE 6.—This patient complained of agony in intercourse. She has superficial sores of the internal labia, vaginitis, and endometritis. The pharynx is ulcerated and the glands are enlarged in the groin. The cicatrix of a repaired perineum is exquisitely tender to the touch.

CASE 7.—This patient, aged twenty-eight years, complained of pain in the back and groin. She had been married nine years. There had been four live births and one abortion. She had suffered from discharge for eight years. She was regular, but lost a great deal. Her hair fell out during the last conception, which ended in abortion. She had sore-throats at the same time, and the pharynx is now ulcerated. She has always lost a great deal of blood at her confinements. The cervix is split and everted.

CASE 8.—This patient was a woman, aged fifty years. Two girls were born in the first two years after marriage. Then the husband was very ill with "rheumatic fever." An abortion followed, then a live birth, then an abortion, and then two live births. The confinements have always been bad, with six weeks of lochia. After the second girl was born bleeding continued for three months. She now complains of abdominal and rectal pain. On vaginal examination the os uteri was found to be split and tethered to the vagina by bands in every direction, and the rectum is drawn in.

I would point out in connexion with such cases that labour is often protracted from uterine inertia, often necessitating forceps. The post-partum hæmorrhage is profuse and the lochia are prolonged. It is not very uncommon to meet with adhesions of the os uteri to the vagina, of increasing obstructive dysmenorrhœa, and sterility after one conception in parous women. The fibrous adhesions and fibroid condition met with in dilating the cervical canal are well known. Syphilitic stricture of the cervical canal or os uteri is apparently analogous to syphilitic stricture of the urethra in the male, and all the above-mentioned conditions may well illustrate some of the less ostensible symptoms of syphilis in parous women.

A further question follows. Why do plastic operations in women, undertaken with so much care and skill, often fail? The value of mercury in so many cases of pelvic disease in parous women not only testifies to a syphilitic basis, but probably makes it essential that mercurial treatment in many cases should go hand in hand with operative procedure.

Grosvenor-street, W.

A CASE OF ANKYLOSIS OF ALL THE JOINTS WITH COMPLETE CLOSURE OF THE JAWS, IN WHICH THE POWER OF MASTICATION WAS RESTORED BY DIVISION OF THE NECKS OF THE LOWER JAW:

WITH SOME REMARKS ON THE OPERATIVE TREATMENT OF CASES OF ANKYLOSIS OF THE TEMPORO-MAXILLARY JOINT.[1]

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A MAN, aged fifty-seven years, was sent to me at the Bristol General Hospital by Mr. W. F. Carter, of Bristol, in October, 1896. In all the joints movement was limited, and in most there was complete fixation. The spine and head were perfectly rigid. Deformity was marked both in the large joints and in those of the hands and feet. In some joints where slight movement was possible there was coarse grating, and around a few joints distinct osteophytic outgrowths were present. Muscular wasting was extreme; the skin of some of the fingers was glossy, and some of the nails were of extraordinary thickness. The thickening of the nails was not present in all the fingers. The joint troubles began fourteen years previously in the knees, and the fingers were affected after the larger joints. He was able to walk with sticks until nine years ago. For the last six years he had been confined to bed and unable to feed himself, and for four years he had been unable to open his jaws and therefore unable to take solid food, and had simply sucked fluids between his teeth. He had had no joint trouble in early life, nor was there any family history of such disease. The following is a description of the condition of all the joints. Both knees were absolutely fixed at a right angle. The bony outline was very prominent from the wasting of the muscles, but no osteophytic growths were discovered. The tendons in the popliteal space did not feel contracted. No movement was detected in either hip-joint. There was limited movement in the left ankle, but the right ankle was almost completely fixed. All the toes of the left foot except the great toe were hyper-extended (some to a right angle with the dorsum), and the heads of the metatarsal bones from which they were displaced could be felt from the sole. The middle three toes of the right foot were in the position of hammer-toes. The nails on several toes were of extraordinary length and thickness. The left wrist was flexed almost to a right angle with the forearm and quite ankylosed. The fingers of the left hand were all flexed at the metacarpo-phalangeal joints, and there was marked deviation to the ulnar side. Movement in the finger joints was much limited. There was marked osteophytic outgrowth about the heads of the metacarpal bones. The nails on some of the fingers were almost normal, on others they formed a horny mass half an inch in thickness, and the skin of the fingers was glossy. There was no grating in any of the joints. The left thumb was also flexed at the metacarpo-phalangeal joint, but was hyper-extended at the terminal one, and movement in its joints was as limited as in the fingers. The right wrist was slightly flexed and very little movement was possible in it. All the fingers of the right hand were hyper-extended at the metacarpo-phalangeal joint, flexed at the middle phalangeal joint, and hyper-extended again at the terminal joint. There was hardly any movement possible in any of the joints, and osteophytic outgrowths were present on the dorsal aspect of the digital extremities of the first phalanges forming the middle phalangeal joint. The position of the right thumb was the same as the left. There was slight grating in its metacarpo-phalangeal joint. The left elbow was quite ankylosed and was much more flexed than a right angle with the upper arm. In the right elbow there was slight movement which was painful, and there were some sharp osteophytic outgrowths from the inner

[1] A paper read before the Bath and Bristol Branch of the British Medical Association.

condyle. In the left shoulder rotation was possible to a slight extent, but was accompanied by coarse grating. In the right arm the movement at the shoulder was wholly scapular. There was no movement in any part of the spine, but no excessive bony growth could be detected. The chest only moved slightly on deep inspiration; in quiet breathing the abdominal wall alone moved. There was no evidence of rotation of the atlas on the axis, and it was doubtful whether there was any movement between the atlas and the occipital bone.

There is so much confusion between the terms chronic rheumatism, rheumatic arthritis, and rheumatoid arthritis that it would not perhaps be profitable to discuss at length the nature of the joint lesions, but taking the definite disease which is perhaps most clearly distinguished by the term osteo-arthritis we may inquire whether it was of this nature. The deformity, the coarse grating in the joints, the osteophytic outgrowth, and the glossy skin all point to the disease being a form of osteo-arthritis. On the other hand, true ankylosis, that is, ankylosis which is not merely the result of locking of osteophytic outgrowths, is rare in osteo-arthritis. In this case the fixation of the joints was clearly not due to osteophytic outgrowths, for they were only present around a few joints and were absent in many which were absolutely fixed. I cannot find the record of any case of ankylosis of the temporo-maxillary joints in osteo-arthritis, though they have become ankylosed from traumatism and suppurative arthritis in several cases. The first time the condyle was excised was for osteo-arthritis. There was no ankylosis, but great enlargement of the condyle, producing marked deformity of the jaw. This was Professor Humphry's case, and was published in the *Medical Association Journal* in 1856.[2] In another case (one of Mr. Heath's)[3] there was also enlargement of the condyle, and a bony mass united it to the malar bone. In one recorded case of ankylosis of this joint, to which reference will be again made, the patient had had rheumatic fever and suffered from recurrent sub-acute attacks.[4]

In my own case there was no evidence of enlargement of the condyles, but there was complete fixation of the joint, so that the jaws could not be opened. It was, of course, impossible to tell whether the ankylosis affected one or both joints. To remedy such a condition either the adhesion in the joint must be broken down, or the joint excised, or a new joint formed. It was impossible in this case to lever open the jaws, as the teeth could not be separated at all, and hence no wedge or screw-gag could be introduced; and, moreover, Mr. Paul Swain has shown, from the collected records of cases, that all such attempts fail.[5] A new joint has usually been formed by removal of a wedge of bone just in front of the angle of the jaw—Esmarch's operation. The respective advantages and disadvantages of the two operations I will consider presently. I decided on excision of the condyle or condyles, and the operation I am about to describe was performed in exactly the same way on both sides, as the ankylosis was found to be bilateral. It was done on Oct. 27th, 1896. An incision was made about one inch in length parallel with, and a quarter of an inch below, the lower border of the zygoma, commencing just in front of the ear and extending forwards, therefore beginning over the temporal artery, but not deep enough at that spot to wound it. A portion of the parotid gland, superficial fascia, and fat were divided, and several small vessels were tied. The masseter was then exposed and was divided, and I came down on the zygoma, with the neck of the jaw fixed to it as if it were one bone. There was no sign of any joint, nor could any movement be made out on attempting to open the jaw. I then inserted a curved narrow copper spatula under the neck from behind, so as to separate it from the internal maxillary and other vessels, and divided the neck with an Adam's saw and a few chisel cuts. When I found the joint was completely obliterated I gave up the idea of excising the condyle. I saw no branches of the facial nerve on the right side; on the left, when retracting the fascia over the masseter, the orbicularis palpebrarum and oris both twitched. When separating the divided portions of the neck on the left side with a periosteal elevator some rather free bleeding occurred from a vessel behind the neck—probably a torn venous branch—and I had to leave a pair of pressure forceps on, as it was impossible to tie it. These were removed next day, and the wounds healed without suppuration. After divisions of both necks I was able to lever the jaw open, so that there was a space of a quarter of an inch between the teeth, and a few days after the operation he could open it one-eighth of an inch more and could eat all kinds of solid food. Nearly a month after the operation I opened the jaw with a screw gag under chloroform so that there was nearly an inch space between the teeth. I heard in February of this year that he was still able to eat solid food easily.[6] There was a little paresis of the left orbicularis palpebrarum after the operation, but with the application of the faradaic current this soon passed off.

After excision of the condyle or division of the neck of the jaw the difficulty in forcing open the jaw lies in the contracted condition of the muscles, especially the temporal muscle. After dividing the neck on both sides in this case I found the movement at the point of section free, but the contracted temporal and masseter muscles kept the jaws from separating to any extent, and I had to gradually lever them open in order to obtain a satisfactory result, a process which was repeated some weeks after the operation. I believe that it is best to make only a horizontal incision below the zygoma, and not a vertical one at all, as division of branches of the facial nerve is more likely to occur with the latter, however short, and I believe it would not give a distinctly greater access to the joint than a fairly long horizontal incision.

The respective advantages and disadvantages of excision of the condyle and Esmarch's operation of removal of a wedge-shaped piece of bone from just in front of the angle of the jaw remain to be considered. It seems to me that if we can liberate the joint so that it will not again become fixed it would be much better to do so than to perform Esmarch's operation. After a double Esmarch's operation the body would be quite cut off from the ascending rami, so that the masseters, temporals, and pterygoids could not act on the movable portion, and the ability to close the jaw would be lost; nor could any antero-posterior or lateral masticatory movements be performed. It seems possible that in time the buccinator might partially take on the action of the masseter and be able partly to close the jaw. That the power of closure does return is shown by the records of cases in which the operation has been performed, but it does not become possible for lateral masticatory movements to be carried on. If the wedge in Esmarch's operation is taken out so far back as to include the angle, as has been done in a few cases, then the attachment of the masseter would not necessarily be wholly separated from the movable portion, and closure could be feebly effected by the portion left attached. On the other hand, some surgeons have brought forward this very severance of the movable portion of the jaw from the masseter and other muscles which close the jaw as a great advantage of Esmarch's operation, for it, of course, tends to prevent the divided portions of jaw being forcibly drawn together and so reunited. The most serious objection to operation on the joint is the unfortunate tendency there is for it to become again fixed after operation; and no doubt the temporo-maxillary joint is in a somewhat dangerous locality for operative interference, with the internal maxillary artery so close to it beneath and the branches of the facial nerve lying over it in the way of the necessary incision. Temporary paralysis of some of the branches of the nerve is not uncommon after the operation, and in one case the external carotid artery was wounded.[7] The facial artery might be wounded in Esmarch's operation, but could probably be pushed out of the way, or if divided could be easily secured, whereas the internal maxillary artery if wounded might be very difficult to secure, as it lies behind the junction of the neck and ascending ramus. The inferior dental artery is divided in Esmarch's operation, but does not bleed when sawn through, nor does division of the inferior dental nerve give rise to any trouble. If Esmarch's operation is performed for fixation of the jaw due to a unilateral cause, then the muscles of the side on which the operation has not been performed will, of course, close the jaw, but antero-posterior and lateral masticatory movements would necessarily be very imperfect from the inability of the external pterygoid, masseter, and temporal muscles to act on the side from which the wedge had been removed. We should, indeed, expect the body of the jaw to be somewhat pushed over to the side operated on by the external pterygoid of the

[2] Page 61.
[3] Brit. Med. Jour., vol. ii., 1884.
[4] Bennett: Transactions of the Clinical Society, vol. xxii.
[5] THE LANCET, July 28th, 1894, p. 187.
[6] A later report (July 15th, 1897) said that he could eat solid food, but could not open the jaw as widely as in February.
[7] Allingham: Brit. Med. Jour., vol. i., 1890, p. 129.

other side. It has sometimes happened after Esmarch's operation on both sides that the power of swallowing has been interfered with from loss of a fixed point for action of the elevators of the hyoid bone when the body of the jaw has been detached from the rami. A case under Mr. Bennett's care[8] so well illustrates the advantages and disadvantages of Esmarch's operation and excision of the condyle that I will give a short abstract of it. The patient suffered from complete fixation of the jaw. Mr. Howse, at Guy's Hospital, exposed both temporo maxillary joints, finding very firm ankylosis, and excised both condyles. The joint again became fixed, and Mr. Howse then removed a portion of one ascending ramus, but this subsequently united. Mr. Bennett then performed Esmarch's operation on both sides with a week's interval. The jaw opened after the second operation, but the patient was quite unable to close it, and as the elevator muscles of the hyoid bone had no longer a fixed point of attachment he became unable to swallow and had to be fed by a tube passed through the nose and down the pharynx for two days. The jaw was then fixed in position by an elastic bandage and the power of swallowing returned. The power to close the jaw also ultimately returned. Mr. Paul Swain reports[9] a case of bilateral ankylosis in which he removed a triangular piece of bone from both angles of the jaw at one operation with very satisfactory results. There was no interference with swallowing, and no mention is made of inability to close the jaw. Doubtless some anterior fibres of the muscles were attached to the lower jaw in front of the section of the bone, and enabled the patient to close the jaw, and thus give the hyoid muscles their fixed point for action. There are, of course, many cases in which we have no choice between an operation on the joint and Esmarch's operation—cases in which the jaw is fixed by a dense cicatrix such as may follow cancrum oris or injury to the cheek or jaws. In such cases we must make a false joint in front of the cicatrix, but they are almost always unilateral.

Mr. Paul Swain has collected[10] the records of twenty cases of operation for closure of the jaws the result of injury or disease of the temporo-maxillary articulation. He found that out of this number seven resulted from the after effects of scarlet fever, three from measles and subsequent otorrhœa, three from rheumatism, two from affections of the teeth, and five from injury. In eleven cases the condyle or a portion of the neck was excised, and in five Esmarch's operation was performed. To the cases collected by Mr. Paul Swain must be added four recently published by Mr. Arbuthnot Lane.[11]

CASE 1.—Bony ankylosis after fracture of the zygoma. The upper and posterior angle of the jaw with a portion of the temporal bone to which it was fused was excised with good result.

CASE 2.—Bony ankylosis from old suppurative arthritis, with very imperfect development of the jaw. The same operation was performed, and the body of the jaw was divided as well to overcome the deformity. The result was good.

CASE 3.—Bony ankylosis after scarlet fever. Same operation and result.

CASE 4.—Bony ankylosis after abscess in the neighbourhood of the jaw. Same operation and result.

All these patients were children. Mr. Lane has operated once in an adult and obtained a very good result for a time, but relapse took place and he had to remove more bone. He lays stress on the difficulty of thoroughly free removal of bone in these cases, as all trace of the joint has disappeared and the neck is ill developed, but believes that it must be freely removed to ensure a successful result.[12]

Clifton, Bristol.

[8] Transactions of the Clinical Society, vol. xxii.
[9] THE LANCET, July 28th, 1894, p. 189.
[10] THE LANCET, July 28th, 1894, p. 187.
[11] Transactions of the Clinical Society, 1896, p. 1.
[12] Since sending this paper for publication a very valuable contribution from Dr. Cabot, of Boston, on the Surgical Treatment of Ankylosis of the Temporo-maxillary Articulation has been published in THE LANCET of Aug. 7th, p. 304, and I am interested to see that Dr. Cabot advocates division of the condyle in preference to Esmarch's method, and records seven cases in which he performed this operation.

DR. GRANVILLE BANTOCK has been elected an Honorary Fellow of the Obstetrical Society of Edinburgh.

NOTES ON A CASE OF PAN-HYSTERECTOMY.

BY M. U. O'SULLIVAN, L.R.C.P. EDIN.

I AM sure that every surgeon of experience in the operation of abdominal pan-hysterectomy will admit at once that the chief difficulties are encountered in dealing with the floor of the pelvis and roof of the vagina. It has long appeared to me that a suitable vaginal guide would not only materially facilitate operative technique at this juncture, but would obviate the danger of encroaching too much on the roof of the vagina. In my first six cases of complete extirpation I resorted to the abdomino-vaginal method, commencing the operation as in the first stage of vaginal hysterectomy; but this method is open to the objection that upon opening the peritoneal cavity some special indication may be found against completing the operation on the lines originally intended, leaving the patient with a vaginal wound to still further hamper her recovery. Mr. Bowreman Jessett, in this operation, used a Ferguson speculum, pushed up by an assistant as a guide; but the difficulty—or, rather, I should say, the hopelessness—of keeping the vaginal cervix in the vast majority of "fibroids" within the lumen of a speculum is at once obvious. Other surgeons have used the finger of an assistant pushed up into the vagina as a guide to cut down upon, but this is a procedure not likely to recommend itself to the precise and careful operator. The vaginal forceps (Fig. 1) and director, of which illustrations appear, has been used in four cases with much advantage to the patient and with the greatest satisfaction to myself. It was made after my direction by Messrs. Mayer and Meltzer. I give the notes of one case.

FIG. 1.

A woman, aged forty years, single, was admitted to the Women's Hospital, Melbourne, on July 8th, 1896. The catamenia first appeared at the age of twelve years; she was regular up to two years ago, but the menses had been irregular, profuse, and painful during the past two years. During the past three months she had complained of severe pain in the right iliac fossa and sacral region, frequency and pain in micturition, bearing down, &c. On examination, a rounded median tumour of hard consistence could be felt filling the pelvis and extending above the umbilicus. The cervix uteri was pushed far back in the hollow of the sacrum. The patient was prepared as for cœliotomy and vaginal hysterectomy and was placed in the lithotomy position, the lower limbs being separated by assistants. A Sims speculum was passed, and the vagina thoroughly scrubbed with a 1 in 500 perchloride solution. The cervix was now grasped with the combined vaginal forceps and director, the blades of which were firmly locked and the patient returned to the supine position. The abdomen was opened by a free incision extending from above the umbilicus to within a short distance of the pubes, and the tumour "delivered"—this being very materially facilitated by an assistant steadily pushing the tumour and uterus towards the abdominal cavity, on the forceps and director, within the

cup-shaped end of which the cervix sits, firmly held. (And here I would claim that there is a decided advantage in being able to dispense with, in many cases, the ponderous prehension forceps generally used for elevating uterine fibroids through the abdominal wound during operation, and

FIG. 2.

Forceps with blades unlocked.

so preventing the annoying hæmorrhage which sometimes takes place from forceps punctures of such tumours.) The broad ligaments were divided between two rows of ligatures, and the usual peritoneal flaps dissected down off the anterior and posterior surfaces of the uterus with blunt scissors and finger. The uterine arteries were now easily picked up on an aneurysm needle and secured outside the reflected peritoneum. The vagina was opened by running a knife around the cervix, within the hollow of the vaginal director, which was still steadied by an assistant and easily felt. Now, instead of suturing the peritoneal flaps as I have done in previous cases, I passed about half a dozen long silk sutures through the edges of the peritoneal flaps and drew them into the vagina, thus completely closing the peritoneal floor. With a Sims speculum the vagina was now well packed with iodoform gauze, firm traction being kept on the flap sutures during the packing. The abdominal wound was closed with deep silkworm gut and superficial horsehair sutures. The vaginal packing was removed on the fourth day after operation, and the sutures on the eighth day. The patient made a perfect recovery and left the hospital on Aug. 27th, 1896.

Melbourne.

A CASE OF HEMICHOREA WITH APHASIA.

BY S. J. ROSS, M.B., CH B. VICT.,
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A GIRL, aged fourteen years, at the age of eight years had had an attack of acute rheumatism which left traces behind in the form of well-marked mitral regurgitation. A week before being seen she was thrown from a cart, and on the day following the accident her mother noticed that her right arm and leg were constantly in motion and she was restless and never answered questions put to her. Thinking "she was merely shaken" she was put to bed, her parents hoping that by taking rest she would soon be well again. However, as she did not improve I was asked to see her seven days after her fall from the cart. Her condition at this time was as follows. She was in a condition of marked cerebral instability, now laughing and the next minute in tears. Her pupils were dilated. There were marked choreiform movements in the right arm and leg. The tongue was protruded with a jerk and as suddenly withdrawn. The knee-jerk on the right side was exaggerated; on the left side it was normal. Sensation was normal. There were marked cardiac irregularity and a mitral systolic murmur conducted to the back, with accentuation of the pulmonary second sound. On being asked questions the patient simply nodded assent or dissent. The movements ceased during sleep.

The treatment adopted was absolute rest, milk only, arsenical solution in increasing doses—as diet at one time she was taking ten minims three times a day—and occasional purgatives. In six weeks she was on full diet and had perfectly regained her power of speech.

Remarks.—A case such as this points clearly to the cerebral origin of the lesion. The emotion and cessation of movements during sleep, the exaggerated right knee-jerk and aphasia, point clearly to a lesion on the left side of the brain, not permanent, but functional, or at any rate capable of complete resolution. What the exact pathological change may be is not known, and, indeed, we must be left in doubt as chorea is a disease so amenable to treatment. Gowers suggests a lowered resistance on the part of the cerebral cells. If this be true it is curious that in cases such as this of true hemichorea this lowered resistance should be limited to the cells on one side of the brain. Others have suggested a rheumatic inflammation of the cerebral neuroglia—a neurogliosis—these nodules corresponding to the periosteal nodes so frequently found along bones such as the tibia. Whatever the exact pathological change may be it is certainly curious that arsenic should have absolute control over it—a control which no other drug possesses, except, perhaps, in those cases of convulsive or epileptiform varieties of chorea when a combination of chloral hydrate and bromide of potassium is the most successful treatment, at any rate at first, arsenic frequently being resorted to after the convulsive stage has passed. In offering these remarks of course I do not include that form of nervous disturbance which is often called post-hemiplegic chorea, but which ought rather to be called post-hemiplegic mobile spasm, as suggested by Gowers.

A CASE OF OBSTRUCTIVE SUPPRESSION OF URINE.

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A LITTLE girl, aged eleven years, was brought to the Brompton Hospital for Consumption and Diseases of the Chest in a state of collapse, the mother stating that almost incessant vomiting had occurred for a week; the bowels had been confined during that period. The aspect was suggestively abdominal, and the case appeared to be one of intestinal obstruction. The patient was at once admitted under Dr. Green, who has most kindly allowed me to write this account. The more complete examination then possible failed to detect any abdominal tumour or evidence of peritonitis. The child, although drowsy, was quite conscious; the temperature in the axilla was 96° F.; the pulse 120 per minute, small and thready; and the respirations were 25 per minute and shallow. On auscultation an apical systolic bruit and moist râles, with friction sounds at the posterior bases of both lungs, were heard. There was no œdema. Spasms of the levatores palpebrarum and internal recti occurred every few minutes, but no other muscular twitchings were noted. The tongue was very foul and the breath was urinous. Further inquiry elicited the fact that three years previously an operation—details of which I have been unable to ascertain—was performed for an abscess of the right kidney. Two years previously there had been a severe illness, lasting several days, the prominent feature of which was agonising pain in the loin. For the last ten days or so there had been much headache, and for a week frequent vomiting. For at least five days prior to admission no urine had been passed, and for several months previously the child had passed urine only at comparatively long intervals (twenty-four hours or more), and then with pain. During the night after admission seven and a half ounces of turbid urine were passed. The urine was acid, of specific gravity 1020, gave a heavy precipitate with picric acid solution, and contained many pus cells, but was without either casts or blood. No more urine was passed during life, and after death the bladder was found to be empty. Vomiting occurred four or five times during the following day, and the spasms of the ocular muscles happened as frequently as before. The pupils were equal and slightly dilated. The child rallied slightly on the whole; the pulse improved, and the rectal temperature rose to 98°, and subsequently to 100°. Towards night the respirations, which had been tranquil, became hissing in character, and the rate rose to 30 or 35 per minute. The drowsiness increased at the same time. By the early morning these symptoms had passed off, but only to recur with greater severity for an hour or two before death, which took place rather suddenly

forty-eight hours after admission. Vomiting had taken place about a dozen times in the two days. The child was conscious, and answered questions two hours before death. The only symptom that developed under observation was the hissing character of the respirations.

At the necropsy, which was made by Dr. Habershon, there was found general acute pleurisy, with a deposit of thick yellow lymph over the lower lobe of each lung. The heart weighed four and three-quarter ounces, and the wall of the left ventricle was thickened without any obvious valvular lesion. In the place of the right kidney there was found a mass of fat and fibrous tissue which on section displayed a smooth cavity three inches in length, connected with which were one or two much smaller cavities. These cavities, which obviously represented the pelvis and calices of the kidney, held a few drachms of brownish fluid. A few islets of renal tissue were found scattered in the fat and fibrous tissue. The right ureter (four and a half inches in length) was moderately dilated, and its opening into what had been the pelvis of the kidney was completely blocked. The wall of the bladder was three-quarters of an inch in thickness, and the whole organ was hypertrophied without any obvious dilatation. The mucous membrane of the bladder was deeply congested and much pigmented. The left kidney was enlarged, four inches in length, and the pelvis and calices were much dilated. The pyramids were flattened to a thin layer, and the cortex, which was not congested, was slightly fatty and about three-eighths of an inch in thickness. The capsule was not unduly adherent. The first two inches of the left ureter below the pelvis of the kidney were dilated, admitting the little finger with ease. The pelvis and calices of the kidney and this portion of the ureter were distended with clear, urinous fluid. At two inches from its point of origin the ureter was narrowed and the mucous membrane for half an inch vertically was much puckered as if by cicatrisation. A horizontal fold of mucous membrane here formed a valvular, but complete, obstruction which could only have been overcome by dilatation of the narrowed portion of the ureter. Below the point of complete obstruction the ureter was again dilated and tortuous, its total length being six and a half inches. The ureter below the obstruction contained no fluid. Probably when the pressure of urine accumulated above the valve reached a certain degree the narrowed portion of the ureter yielded, allowing urine to escape through the valve. The fatal issue must have been due to the fact that finally the obstruction could not be thus overcome, and the pressure of urine accumulated above it had reached the point at which (according to the general view of the pathology of suppression in these cases) further secretion of urine was no longer possible.

The readiest explanation of the anatomical facts seemed to be that the stenosis and puckering were the result of a cicatrix following injury to the ureteric wall from the passage of a calculus, presumably at the time of the illness two years previously. To the obstruction, which must necessarily have been intermittent only until the last week of life, was due the dilatation of the kidney and first part of the ureter. The dilatation of the lower part of the left ureter may have been due to the obstruction afforded by the hypertrophied wall of the bladder. There was no anatomical evidence that regurgitation of urine from the bladder into the ureter had occurred. I have been unable to ascertain whether or no the "abscess" of the right kidney was due to stone. Probably it was. The hypertrophy of the bladder may have resulted (as in diabetes) from the increased quantities of urine it had been called on to discharge from time to time; but the chronic cystitis suggested a more likely cause—namely, that a stone had been retained in the bladder, setting up intermittent obstruction at the neck. The parents could give no information on this as on several other points, beyond stating that the urine had frequently smelt foul and that its passage had given rise to pain.

Although the interpretation of the case in several respects is uncertain, there can, I think, be very little doubt that death was due to obstructive suppression of urine. Clinically, there were two points of difference from the description usually given of such cases—(1) it was the urinous smell that first suggested the correct diagnosis; and (2) the vomiting was so severe as to suggest intestinal obstruction. In another case that I have seen (in which simultaneous plugging of the ureters by calculi had occurred), vomiting was so grave a symptom as to lead to the diagnosis of intestinal obstruction. Sir William Roberts states that an urinous smell is hardly ever, and persistent vomiting seldom, a symptom of obstructive suppression of urine. It is not easy to see why the symptoms of this form of suppression of urine should differ so widely from those of non-obstructive suppression, or why life should be, in the one group of cases, prolonged for such relatively long periods after secretion of urine has ceased without coma supervening. It is generally recognised now that the kidney has other than purely excretory functions, and it is perhaps possible that in obstructive suppression it is the excretory function only or chiefly that is in abeyance, while in non-obstructive suppression all renal functions are suspended. There is experimental evidence which goes some way towards proving that urine ceases to be excreted when the pressure of urine in the pelvis counterpoises the pressure in the renal arterioles. If this be the mechanism of suppression in the obstructive cases, it is quite possible that under such conditions the kidney cells might continue their metabolic (internal secretory) functions. But when such organic disturbance of the renal cells occurs as must be the case in acute nephritis leading to suppression of urine, it is hard to see how any renal functions whatever can be efficiently performed. If this view be in any degree valid we have perhaps some explanation of the difference in symptoms between the two classes of cases of suppression of urine.

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INFLUENZA.

BY GEORGE GRESSWELL, M.A. OXFORD AND CAPE OF GOOD HOPE, L.R.C.P., L.R.C.S.EDIN., L.F.P.S.GLASG.

THE recent extensive acquaintance with epidemics of this disease in a virulent form, not only in this country, but throughout the world, is perhaps one of the most instructive and important experiences of the last few years. True it is that, looked at from one aspect, influenza may be classed as a minor scourge. It is well that this is so, because science seems as yet almost completely powerless in arresting its spread. As a rule, when properly managed and skilfully treated from the outset, patients do not succumb. Unless dangerous complications are present at first or arise in the course of the complaint the percentage of deaths is only small. Nevertheless, as is well known, very large numbers of people have been affected and rendered incapable. Not only is it the case that whole communities are liable to be stricken down, but it is also a fact that the victims are prostrated with marked nervous, febrile, and catarrhal symptoms, and are afterwards liable to be attacked with distressing and debilitating sequelæ.

One of the most important points is that symptoms pointing to implication of the nervous system are produced, although it has been in past times held that influenza is essentially manifested by a specific kind of inflammation of the respiratory and alimentary tracts almost exclusively, affecting sometimes in chief part either the one or the other of these, or at other times both either coincidently or consecutively. Now we know from repeated practical experience that we must include the nervous system as liable to be attacked quite as readily as either the respiratory or the digestive system. In fact, we must really look upon it as a general infection of the whole system, the blood no doubt being the medium of the distribution of the poison to all parts. However, it often appears to be the case that the one or the other of these two systems may be the primary seat of manifestation. In reality, then, we are considering a specific fever with well-known symptoms, now practically very familiar. As for the temperature, it may be high, and as a rule in all severe cases the mental collapse is so extreme that to the sufferer it may well seem that even death would be preferable to such misery as is experienced. Yet, although not only its origin from infection, but also its pathology, are extremely simple, the disease may well be termed a protean malady, since so many degrees of severity and so many apparently distinct forms does it assume. It is not, however, difficult to understand why this malady should affect in divers ways different people and the same person under dissimilar conditions. As a matter of fact, all diseases are liable to variations of type, as is well known; but this is more strikingly shown in the case of influenza, partly, perhaps, on account of its very wide and almost

universal distribution, and principally, perhaps, because there is scarcely a part of the system which is not vulnerable to its virus.

The rashes of influenza cases are confusing and apt to mislead; and I have seen a girl with a rash like that of typhus fever where there was probably nothing but a very bad attack of influenza. However, no importance can be attached to one such rash. On the other hand, cases repeatedly arise where we have little more serious to deal with than the simple coryza which undoubtedly may arise from a chill or benign cold. Probably such mild influenzas might, after all, be caused by an attenuated virus, for no doubt such germs are practically omnipresent in the air to a greater or less extent—at any rate, during epidemics. Similarly one may mention the two kinds of chancres, benign and malignant, the two kinds of psoriasis, the two kinds of diphtheritic throats, perhaps similarly related.

Horses, and probably most other animals, including cats, which probably often serve as channels of infection, are liable to attack. It seems to be without doubt carried through the air, and probably by the prevailing winds for long distances. Its progress is irresistible, and there is no known method of escaping from the infection. That the malady can be wafted over seas, oceans, and lakes seems at least probable, for many cases are known of sailors far away from land being affected. Unless the period of incubation be a very long one—a supposition we do not like to admit without very good proofs—we have no other very likely explanation of such examples, except, indeed, the possibility of clothes carrying the germs of the disease, and then a chill or exposure to cold rendering the object of attack vulnerable. To this we prefer the air-borne theory of transmission. We all recollect how, although we were well prepared by the newspapers for its expected appearance amongst us, many of us did not at first recognise the early indications of its presence in our midst. Very soon, however, as case followed case, it was very clear that we had to deal with a specific disease more important than the perennial epidemics of ordinary colds. This fever which was ravaging the whole country manifestly presented some peculiar and hitherto unfamiliar features. A very large number of cases presenting all degrees of severity came under the treatment of every practitioner, and we soon learned to recognise the cases at once, and their correct management and treatment was simple enough, the only difficulty being that the medical man himself was sure to be affected sooner or later, and it is no exaggeration to say that most of us were nearly worked to death, and not a few actually died in consequence of carrying on work when incapacitated.

It has often passed current as true that a low state of the general health made one more liable to attack. This is a statement which, however probable it may appear to be as an *a priori* assumption, is not consistent with facts. It is in short an inference for which there is no foundation. Indeed, the healthier one may be the more likely he will be, if exposed to a sufficient degree of infection, to fall down a victim. The strongest and most robust agricultural labourers living a healthy and regular life were readily affected, especially, perhaps, in cold and wet weather. One attack, so far from conferring immunity, seems to render an individual more prone to subsequent infection, provided a short interval has elapsed. In other words, any immunity which there may be is of the most transient nature. There are very few people who have not suffered from influenza, and even many of these may have really had it in a mild form without its true nature being recognised, or, if not, they may look upon it as a probable treat in store. Most persons have had it more than once, whilst many have repeatedly been afflicted, some, like myself, so frequently that they have lost count of the exact number of times. All those who are liable to be brought into relation with patients suffering from this malady should exercise the greatest care, not only to prevent themselves getting the disease, but also to carry out such measures as would be likely to destroy the germs before they really gained a hold over the system, and thus cut short the infection. One of the very worst attacks I have personally had arose as a result of a professional visit to a very bad case. At this time, having recently returned from a short holiday and being in very good health (so that it seemed almost impossible to catch cold), the only precaution I took was washing carefully and smoking. These measures were not sufficient. It has been held that the period of incubation varies from a few hours to even as long as three weeks. In all probability it is usually only a few hours, and seldom or never more than a day or two. Any evidence of a more prolonged period is vitiated by the fact that it is impossible in nearly all cases to exclude the idea of another source of infection.

It is also said that the invasion may either be gradual or sudden; but in most cases influenza is rather abrupt both in its onset and in its subsidence. A not uncommon first sign of attack appears to be an itchiness and smarting of the eyes and eyelids. The patient feels inclined, in consequence of this uneasiness, to rub the eyes. This itching is apparently caused by a catarrh of the conjunctivæ and is soon accompanied by a copious watering of the eyes. The catarrh very quickly extends to the nose and spreads rapidly downwards, the nasal cavities feel hot and dry, and soon a watery, acrid discharge flows profusely, causing repeated sneezing, and frequently a very uneasy feeling of stoppage and obstruction in the nasal cavities (coryza). Then there are chills or rigors and great misery, lassitude, and prostration, and not uncommonly a feeling of impending death. There is, as a rule, an intense and most painful headache, generally frontal, and perhaps due in part, but not entirely, to congestion of the membrane lining the frontal sinuses. The aching is not always confined to the frontal region. Any part, or, indeed, the whole head, may ache. There is nearly always a feeling of nausea, often actual vomiting, which may be most violent and uncontrollable (comparable even to the violent vomiting which may usher in an attack of small-pox or other specific fever). Pains in the body and limbs may supervene, either very shortly or perhaps the next day. The patient often complains of aching all over, and so great is his misery that he may even long for death to end his sufferings. As for the temperature, it may be normal or only elevated a little, perhaps about one degree or a little more, or it may rise more or less rapidly as high as 104° or 105° F. The skin may either be hot and dry or it may be moist and bedewed with a sour perspiration. The urine may be, after standing, cloudy with deposit of urates, and frequently it is very bad indeed in this respect, being like very muddy water; the sneezing may soon cease or may continue for a day; the power of smell and of taste is impaired; there is a sense of severe dejection, and very likely a very profuse discharge from the nostrils, which may be so copious as at times almost to occlude the nares, and no doubt this excretion augments the headache. Soon sore-throat (mouth, tongue, pharynx, and trachea) and hoarseness come on. At first the throat may be dry, but soon there is expectoration, which extends until bronchitis supervenes. Looking at the back of the mouth one is struck with the intense redness, due to engorgement of the small blood-vessels. This colour is generally demarcated rather sharply just in front of the pillars of the fauces, and forms a striking contrast to the appearance of the tongue, which may be whitish or yellowish white or of a nasty virulent yellowish hue, generally with thick, sticky, moist fur, not like that of ordinary torpidity of the liver, but something almost characteristic and to some extent even diagnostic. Sometimes the tongue is more like that of scarlet fever, being dotted with numerous white spots. Again, in other cases the tongue may be quite clear. This appearance is coupled with a feeling as if the throat had been powerfully scarified with a blunt and rusty knife or old saw. This feeling, though imperceptible in its growth, is worst at an early time of the disease, during the engorging of the blood-vessels and before the redness is best shown. In other words, when the congestion has really occurred the feeling is not so bad. There may be pain along the Eustachian tube, coupled with some deafness. About the lips there is often a herpetic eruption, and a rash often appears on the cheeks, neck, and chest. As a rule the patient is thirsty and has no appetite for food. There is nearly always great prostration and helplessness. At first there may even be inability to get into bed, or at least difficulty in doing so, and, in addition, severe physical discomfort may be experienced. One feels inclined to lie down in sheer exhaustion after the restlessness of the febrile stage has passed, and, as above said, even death may seem to be imminent and desirable to the sufferer. There may or may not be a feeling of oppression across the chest, and severe aching and shooting pains in the head, neck, chest, back, limbs, and abdomen are not unusual. Coupled with the epigastric pain and tenderness (from which the title "la grippe" derived its applicability) there may be nausea and vomiting, and perhaps diarrhœa or constipation. Giddiness and restlessness may be present. It

is not an uncommon occurrence in severe cases for the sufferer to be suddenly struck down helpless, thus presenting a great similarity to the effects of an apoplectic stroke. A case of pure influenza, very much like one of cerebral apoplexy, was that of a woman of mature age, who was attacked with the disease whilst walking in the street homewards. She had been taken into an inn, and was lying quite helpless on the sofa when I arrived, and was almost unconscious and not able to satisfactorily reply to questions. After partially coming to this patient had to be sent home in a cab. This was really nothing more than a sharp seizure of the disease under consideration, yet there was in all probability meningitis and cerebral congestion in this as in several similar cases. It was not only in persons of mature age, nor in the weak, infirm, and unhealthy, nor was it in the intellectual classes that these marked nervous phenomena generally occurred. Another instance was a strong young man who, when I arrived, was similarly prostrate, dazed, and helpless, with the tongue very markedly furred with a nasty yellow covering. He had to be practically carried upstairs to bed, as he had lost nearly all power of movement. Delirium, stupor, and convulsions may occur, and stupor is often shown. In one case, or I may say in two, though I have some doubts as to the exact causation in one of these, continued drowsiness, and, indeed, actual sleep, occurred for the best part of three and a half days. There was in the case which I am clear was one of influenza no danger whatever; but this sleep was uncontrollable, and, indeed, seemed necessary for recovery. These were both young girls. The one about whom I am certain is now married, and I saw her a short time ago and referred to this influenza-sleep which occurred some few years ago. It was a peculiar case, and the sleeping was perfectly genuine. With regard to the pulse, it is as a rule frequent, full, and bounding, but it generally soon becomes soft, weak, and slower.

With regard to prognosis, very early or advanced age, or chronic pulmonary or cardiac disease, and especially, perhaps, nervous complications, render the disease grave. It is very questionable if it is scientific or even wise to make a classification of varieties; but, speaking quite generally and from ordinary practical experience, we may mention four chief types: (1) pulmonic; (2) abdominal; (3) neurotic; and (4) rheumatic. The only or chief merit of this classification is its usefulness. Often a case is met with which does not belong to any of these classes in particular, but presents symptoms of all four types. There is also a malignant form of influenza which may be called typhoid, and, indeed, it is sometimes very difficult indeed to distinguish it from true typhoid fever, especially if the latter begin, as it often does, with a pneumonia. Sometimes, in order to be on the safe side, it seems best to treat such doubtful cases as if they were really typhoid fever in regard to the wisdom of abstention from solids. So puzzling in practice are some of the cases that the question may arise: Is it just possible that there may be some connexion between typhoid fever and typhoid influenza, that the germs of the one disease may be a modified variety of the other? On the whole, it is perhaps wisest to recognise the diseases as distinct.

Perhaps the most characteristic feature of influenza is the intense nervous prostration and feeling of utter helplessness and misery it causes. In most cases presenting any serious symptoms it is quite unnecessary to tell the patients to go to bed, for frequently they can not only not stand, but not even sit down with comfort. In some the prostration is excessive, as it was in a woman under my care who remained in bed for about ten days with an average temperature of 102·5° F., scarcely able to take anything except effervescent or lemon drink and barley water, unable to sleep without the aid of sulphonal or bromides or other sedatives, vomiting and purging persistently whenever any food was taken, and constantly racked with headache and pains in the limbs.

In regard to the important matter of treatment, it may be said to be unwise to adhere to any fixed line. Some authorities condemn the system of treating symptoms; but in reference to influenza special regard must be paid to them. It is above all things necessary to watch the case well and alter the remedies used directly there is need for so doing. On constant watchfulness and care depend our hope of best success. The presence of uric acid in the system should be combated with alkalies. The bowels must be opened daily and diarrhœa checked; vomiting also should be arrested. Where there are lung symptoms, poulticing the chest should be judiciously carried out, and when there is much abdominal pain this is also a very useful measure. Hot flannels with turpentine or some special embrocation, or warm anodyne fomentations, may be substituted. The dieting and general hygienic management are of importance, and at first all solid food should be rigidly prohibited. Antifebrin, phenacetin, citrate of caffein, and gelsemium in small doses are invaluable, when properly used, to arrest the headache. Salicylates, coupled with salts of ammonium and bicarbonates of the alkalies, mingled when necessary with the best cough mixtures, in order to allay the soreness of the throat and the distressing cough, may be advised, with due regard to all the circumstances of the particular case under consideration. Stimulants, such as brandy, whisky, port wine, &c., may be prescribed with care, especially to the old or feeble. Quinine cannot be recommended until the stage of convalescence is reached. The air in the room should be kept pure, if necessary by opening the windows, taking care to avoid draughts. It is also well to have disinfectants about, and it may even be advisable to burn a little sulphur or disengage some sulphur dioxide by other means. The patient may inhale a little iodine from time to time or ammonia from a bottle containing either of these substances. Creosote or eucalyptus or carbolic steam may be preferred, or steam with ether, chloroform, or conium. The patient should keep to bed so long as there be any serious symptoms. With absolute rest in the recumbent posture and fluid diet recovery will be quicker. In adults a dose of calomel is often advisable. The food at first should consist of beef-tea and milk with cold, or iced, or effervescent fluids. Soon the diet may be extended; should capillary bronchitis or symptoms of pneumonia appear decoctions of bark and chloric ether with camphor and ipecacuanha, and some of the usual syrups, as well as stimulants, may be useful. If the pains are severe in the limbs, a larger dose of bicarbonate of potassium may be coupled with some opium, and also with iodide of potassium and salicylate of sodium, or a mixture of bromides may be serviceable. If the temperature be high, sponging with cold or tepid water is very valuable or with a solution of permanganate of potassium. If the headache be severe, cold applications or vinegar cloths may be placed on the painful part, and in some cases two or three leeches are very effectual; indeed, sometimes even one leech acts like a magic charm. During convalescence tonics—e.g., gentian, iron, or quinine, or syrup of the hypophosphites with good food and wine—are advisable. Should there be much debility left after recovery it is wise to order a complete change, if it be possible.

Most patients, however, make a very good recovery, and it is generally only those who have not been properly attended to, taking perhaps no medicine at all, or only such household remedies as are in general use, or perhaps other equally inefficacious nostrums, who are troubled with those interminable complaints which are often traced to the time "when I had the influenza."

New Clee, Great Grimsby.

We have received a copy of the second and revised edition of "The Blazon of Episcopacy," by the Rev. W. K Riland Bedford. This book, which is published by Henry Frowde, at the Oxford University Press, contains an account of the arms borne by or attributed to the archbishops and bishops of England, including Wales, and will interest those of our readers who are of an archæological turn of mind. Students of heraldry are familiar with the fact that many arms are based on puns, and Mr. Bedford's book furnishes some excellent examples—for instance, the arms of Archbishop Herring (Canterbury), show three herrings; of Archbishop Moore (Canterbury), three negroes' heads; of Bishop Horsley (St. Asaph), three horses' heads; of Bishop Harewell (Bath and Wells), three hares; of Bishop Bull (St. David's), three bulls' heads; of Bishop Alcock (Ely), three cocks' heads; of Bishop Cox (Ely), three cocks; of Bishop De Wingham (London), two wings; of Bishop Salmon (Norwich), three salmon; of Bishop Hinds (Norwich), three hinds; of Bishop Sheepshanks (Norwich), a lamb; of Bishop Dove (Peterborough), four doves; of Bishop Towers (Peterborough), a tower; of Bishop Fisher (Rochester), a dolphin; of Bishop Spratt (Rochester), three sprats; of Bishop Cotton (Salisbury), three hanks of cotton; of Bishop Horne (Winchester), three horns; of Bishop Maydenstun (Worcester), a maiden's head; of Bishop Bell (Carlisle), three bells; of Bishop Kite (Carlisle), three kites' heads; and of Bishop Man (Sodor and Man), five human heads.

ON A SIMPLE METHOD OF MEASURING THE ALKALINITY OF THE BLOOD.

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PRELIMINARY CONSIDERATIONS.

BEFORE embarking upon the description of the method of measuring the alkalinity of the blood which is to be dealt with in this paper it will be profitable briefly to discuss the following series of questions:—

1. *What is the meaning of the term "alkalinity"?*—It is not by any means sufficiently realised that the term alkalinity is an eminently ambiguous term. It is a term which may at one moment be employed to denote the quality of consisting of, or containing in solution, a free base, while at another moment it is employed to denote quite a different thing—to wit, the quality of consisting of, or containing in solution, bases which are only very loosely combined with acids.

2. *In what sense is the blood an alkaline fluid?*—The blood is an alkaline fluid not in the first, but only in the second sense of the term. It is, in other words, an alkaline fluid only in the sense of being a fluid which contains bases which are conjugated with very weak acids.

3. *What is our criterion of the alkalinity of a fluid which does not contain free bases?*—It will be obvious to consideration that the only possible criterion of alkalinity which is applicable in the case of a fluid which does not contain free bases is the capacity of such a fluid for yielding up bases to weak acids. This capacity of yielding up bases to weak acids is precisely the quality which is tested by indicators.[1] It follows therefore that our criterion of the alkalinity of the blood is the reaction of blood to an indicator.

4. *What is our measure of the alkalinity of the fluid which does not contain free salts?*—It is a corollary from what has been said above that we can obtain a measure of the alkalinity of such a fluid as the blood by determining what amount of acid addition will tie up all its bases in combinations from which indicators (or, as we may more properly call them, "indicator-acids") will be unable to withdraw them.

The theoretical groundwork of all hæmalkimetrical methods is contained in the answers to these questions. Taking our stand upon this we may pass on to consider what is the most suitable variety of indicator, and what is the most suitable variety of tritrating acid to employ in our hæmalkimetrical observations.

Selection of a suitable variety of indicator.—Indicator-acids, like other acids, differ amongst themselves in their *avidity* for bases. Some indicators, and litmus is a good example of such an indicator, are able to withdraw bases, not only from the normal salts of weak acids (e.g., from Na_2CO_3 and Na_3PO_4), but also from certain chemically acid salts (e.g., from $NaHCO_3$ and Na_2HPO_4). Other indicators, such, for instance, as phenolphthalein, are indeed able to withdraw bases from the normal salts of weak acids, but they are quite unable to withdraw bases from any chemically acid salts. It will be manifest on consideration of these facts that when we are testing a fluid which, like the blood, contains chemically acid salts in solution, it will not be a matter of indifference to our results whether we employ litmus or phenolphthalein as our indicator. On the contrary, the results which we obtain with the one variety of indicator will differ, not only quantitatively, but also qualitatively, from those which we obtain with the other variety of indicator. We shall find, for instance, that normal blood is always definitely alkaline to litmus, whereas it is almost always neutral or acid to phenolphthalein. We shall find, in other words, that litmus is always able to withdraw bases from normal blood, whereas phenolphthalein is generally unable to do so. In the light of this fact it will be manifest that when we propose to ourselves to measure the alkalinity of the blood we are in point of fact proposing to ourselves to measure the capacity of the blood for yielding up bases to one particular variety of indicator—to wit, to free (i.e., red) litmus. Our question as to what is the most suitable variety of indicator to employ for hæmalkimetrical purposes is thus in some measure resolved. The most suitable indicator will be a red or neutral tinted litmus paper.[2] We have still to consider the question of the sensitiveness of our indicator.

Selection of a sufficiently sensitive sample of red litmus paper.—It will be obvious to reflection that inasmuch as red litmus is prepared by liberating the litmus acid from its salts by an excess of added acid, ordinary red litmus paper will contain traces of free acid which will seriously interfere with its sensitiveness to the presence of bases. In view of this fact, every litmus paper which is employed in hæmalkimetrical observations ought previously to be tested as to its sensitiveness. A good sample of red or neutral tinted litmus paper ought to show a distinct and immediate colour change when it is dipped into a forty-fold diluted normal human serum.

Selection of a suitable variety of tritrating acid.—It has been customary to employ solutions of organic acids (solutions, for instance, of oxalic, citric, or tartaric acids) for hæmalkimetrical purposes. The employment of these acids presents an undoubted advantage from the point of view of convenience of preparation. For standardised solutions of these acids can in each case be prepared by merely dissolving a weighed quantity of the particular acid in a measured quantity of water. On the other hand, the employment of these solutions of organic acids is open to serious objection, inasmuch as solutions of these organic acids become gradually weaker owing to the breaking down of these acids under the influence either of bacteria or of light and oxygen. We shall avoid this great source of fallacy in our measurements if we employ standardised solutions of sulphuric acid as our tritrating acid. These questions relative to the most suitable indicator and tritrating acid having been satisfactorily resolved we may pass on to consider the methods of dealing with practical difficulties which are associated *first*, with the presence of blood corpuscles in the blood the alkalinity of which we desire to elicit, and, *secondly*, with the necessity of operating with minimal quantities of blood.

Methods of dealing with the difficulties which are associated with the presence of red blood corpuscles in the blood.—Various methods of dealing with these difficulties have been proposed. Liebreich proposed to deal with these difficulties by impregnating slabs of alabaster or porous clay with litmus. The upper surface of these slabs was intended to hold back the red blood corpuscles while the plasma infiltrated into the substance of the slab. It was proposed to bring the colour change which occurred in the litmus into view by washing off the layer of red blood corpuscles which had deposited itself on the surface of the slab. Schäfer proposed to deal with the difficulty in a somewhat similar way. He coated over his litmus paper with a glaze which was designed to hold back all the red blood corpuscles while it remained perfectly permeable to the plasma. Lastly, Landois, Drouin, and others have dealt with the difficulty by diluting the blood with various salts solutions, and by allowing this diluted plasma which was thus obtained to purge itself of its red blood corpuscles by creeping up by capillarity into a strip of test-paper which was hung into the containing vessel. None of these three methods appears to be well adapted to the *quantitative* determination of the alkalinity of the blood, for by none of these methods can we effect that complete separation of the red blood corpuscles from the blood fluid which is absolutely essential to the accurate determination of the neutral point. In addition to being open to objection in this respect, the method which is employed by Landois and Drouin is open to the serious objection that the more the blood is diluted the more difficult does it become to determine the neutral point with accuracy.

Selection of a variety of blood fluid which shall be suitable for hæmalkimetrical observations.—When we take the defects of the above-mentioned methods into consideration we begin to ask ourselves whether it is not permissible to dispense

[1] Consideration will show that these indicators are in reality acid substances which differ from other acid substances only in possessing the property of combining with bases to form distinctively coloured salts.

[2] Blue litmus paper might also be employed as an indicator inasmuch as it would indicate to us the point at which a surplus of tritrating acid has been added to the blood. But the use of blue litmus would be associated with a double disadvantage. In the first place, when blue litmus is employed it is always a matter of some difficulty to distinguish the red colouration which is indicative of a surplus of added acid from the red colouration which is referable to the presence of red blood corpuscles. In the second place, when blue litmus is employed it is difficult to distinguish the fugitive red colouration which is produced by the carbonic acid which is evolved from the blood under the influence of the tritrating acid from the red colouration which is indicative of the presence of an excess of this tritrating acid. It is obvious that both these sources of fallacy are avoided by the employment of a red or neutral tinted litmus.

with the immediate separation of the corpuscles from the blood-fluid, and to employ a blood-fluid from which the corpuscles have been separated by more effectual and more leisurely processes. We begin to ask ourselves, in fact, whether we may not employ for alkalimetrical purposes, either the perfectly corpuscle-free plasma, which may be obtained by allowing a decalcified blood to sediment in a capillary tube, or the perfectly corpuscle-free serum, which can be obtained by allowing the serum to exude from an ordinary blood-clot. As a matter of fact, an objection can be raised against the employment of either of these blood fluids. This objection is based upon the fact that the blood undergoes a gradual diminution in alkalinity after it has left the blood-vessels. It might, therefore, be urged that the alkalinity of the sedimented plasma or exuded serum would not be a correct measure of the alkalinity of the circulating blood. But consideration will show that this would not be a fatal objection to the utilisation of serum or sedimented plasma if it could be shown, first, that the serum and plasma ultimately come to a condition of stable equilibrium in the matter of alkalinity, and secondly, that the definitive alkalinity of these blood fluids is a faithful index, or even a tolerably faithful index, of the alkalinity of the intravascular blood. Now it is practically certain that these conditions are actually realised. In the first place observations of Zuntz, Peiper, and Winterfitz on the serum, and similar observations of my own on the plasma, have shown that the serum and plasma arrive at a condition of stable equilibrium, within at any rate a few hours, after the blood has been withdrawn from the vessels. And, in the second place, observations of Drouin, which again have been supplemented by a considerable number of observations of my own, have shown that changes in the alkalinity of the circulating blood invariably manifest themselves in charges in the alkalinity of the serum. In view of these facts, and of the fact that it is difficult, if not impossible, to determine with any degree of precision the neutral point of a blood-fluid which contains any red blood corpuscles, it will be obvious that we shall be able to obtain more trustworthy data with reference to the variations in the alkalinity of the blood if we employ, in lieu of the fresh plasma which is contaminated with red blood corpuscles, either the corpuscle-free serum which exudes from a clot or the corpuscle-free plasma which can be obtained by the sedimentation of decalcified blood. Our simplest course—and in these matters the simplest course is always the best course—would appear to be to employ for all hæmalkimetrical purposes the serum which separates out from an ordinary blood clot.

Methods of dealing with the difficulties which are associated with the necessity of operating with minimal quantities of blood-fluid.—The difficulties which are associated with the necessity of operating with minimal quantities of blood-fluid are generally got over by measuring off a series of very small samples of blood fluid into a series of accurately measured, and progressively increasing, quantities of the tritrating acid. The principles of this method cannot be improved upon. On the other hand, the procedure which is usually adopted may be improved upon in two particulars. In the first place, it is well, instead of measuring off the blood or blood fluid into many times its volume of the acid solution, to mix the blood fluid with not more than an equal quantity of the acid solution, and so to avoid unduly diluting it. In the second place, it is well in measuring out the required quantities of acid and blood fluid to employ thin-walled capillary pipettes[3] (such as can be made by drawing out a piece of ordinary glass tubing in the flame) instead of the thick-walled capillary pipettes which are made out of thermometer tubing. The advantages which we gain by employing such thin-walled capillary pipettes are the following: (1) we can readily fill in these capillary pipettes by capillary attraction alone; (2) we do not lose any of our fluid by diffusion over the external surface of the pipette[4]; and (3) we can at any moment and without any trouble make and calibrate such pipettes for ourselves instead of having to purchase them from a glass-blower. We have now sufficiently broken the ground, and may, therefore, pass on without further prologue to the description of the practical details of the method which has been foreshadowed above.

[3] The method of making and calibrating these pipettes will be described below.

[4] It will be obvious that this consideration is not of any great importance when, as, for instance, in the case of blood corpuscle estimations, we are measuring off a small quantity of blood into a much larger quantity of diluting fluid. On the other hand, wherever, as here, we are concerned to mix a small quantity of blood with an equally small quantity of a diluting fluid, it is essential to accuracy that we should not lose any of our fluid by its diffusion over the surface of the pipette.

PRACTICAL DETAILS OF THE METHOD OF MEASURING THE ALKALINITY OF THE BLOOD.

Preparation of the necessary apparatus.—The necessary apparatus is of the simplest kind. It consists of a couple of glass capsules for receiving the blood which is drawn off from the finger, of one or more capillary pipettes for measuring and mixing the serum with the tritrating acid, and of half-a-dozen watch-glasses. The blood capsules and the capillary pipettes[5] are made out by drawing out pieces of ordinary glass tubing (of, say, five-sixteenths of an inch diameter) after heating them in a flame.[6]

Preparation of the necessary reagents.—The necessary reagents consist (*a*) of a supply of a sufficiently sensitive red litmus paper; and (*b*) of a series of dilutions of a standardised sulphuric acid. The preparation of a sufficiently sensitive red litmus paper presents no difficulty if we have at our disposal a satisfactory sample of blue litmus paper, such, for instance, as may be obtained from Grübler and Co., of Leipzig. This blue litmus paper is first to be steeped in a very weak—e.g., in a 1 in 20,000—solution of hydrochloric acid until it assumes a reddish colour. It is then to be carefully washed in distilled water until all traces of fresh acid are removed. Finally, it is to be dried in a hot-air chamber. A litmus paper which is thus prepared will be sensitive enough to respond with an immediate colour change when it is dipped into a twenty- to forty-fold dilution of normal human serum. The weak solutions of standard acids which we require for purposes of tritration can be conveniently made by making a series of progressive dilutions of normal sulphuric acid. Five such solutions—to wit, a twenty-, thirty-, forty-, fifty-, and sixty-fold dilution—of normal sulphuric acid will suffice for all ordinary purposes. From these, as will be presently explained, any further dilutions which may be necessary may very easily be prepared.

Method of obtaining blood and serum for hæmalkimetrical purposes.—A sufficient supply of blood can be obtained from a prick in the finger-tip. The most convenient implement to employ for drawing blood is a sharp-pointed steel nib one of whose points has been broken off. Blood in ample quantities can be obtained by twisting a handkerchief round the finger and making pressure from above downwards. The blood which is obtained in this manner is filled into one or two blood capsules. It may either be aspirated into the capsule, or—and this is the easier plan—the blood capsule may be held at a lower level than the drop of blood, and the blood may then be allowed to run in by gravity, aided by capillary attraction. In any case the capsule ought to be filled in in such a manner that one of its ends may remain perfectly free from blood. When the capsule has been filled in, one or both of its ends may be sealed up in the flame. The blood is then to be allowed to clot undisturbed. As soon as the clot has sufficiently retracted and the serum has attained its definitive alkalinity—i.e., after a period of from three to twenty-four hours—both ends of the capsule are broken off and the colourless serum[7] is drawn off by inserting the end of the capillary pipette into the capsule.

Method of performing the tritration.—Having obtained our serum, it will be convenient to draw off from the capsule at first only the quantity which will be needed for our first tritration. It will be well not to employ for this first tritration more than about a sixth of the whole available quantity.

[5] A *blood capsule* consists of a piece of glass tubing which has been heated in two places about half an inch to an inch apart, and which has been drawn out at these places into a capillary tube. A *capillary pipette* consists of a piece of glass tubing which has been heated in one place, and which has been drawn out there into a capillary tube. It is convenient, but it is not essential, to form a mixing chamber upon the capillary pipette by heating and drawing out the tube again at the point where the wide tube begins to tail off into the capillary stem.

[6] If an ordinary blow-pipe flame or a Bunsen flame is not available the glass tubing can, in conformity with a suggestion which was made by Surgeon-Major Semple and myself, be satisfactorily drawn out in the extemporised blow-pips flame which can be obtained by applying a lighted match to a finely divided spray of methylated spirits.

[7] The serum which is obtained in this manner will, in the large majority of cases, be perfectly free from blood-corpuscles. If, however, it happens to be contaminated with these, it may very easily be freed from them by a simple process of sedimentation. To accomplish this it will only be necessary to seal up the capillary pipette which contains the bloody serum and to set it up on end for a few minutes in a test-tube rack.

If the total quantity which is available is a very small quantity we shall therefore employ an extremely fine capillary pipette. If, on the other hand, we have a relatively considerable quantity of serum available we shall employ a capillary pipette of correspondingly larger bore. In any case, we shall do well to arrange matters so that the quantity of serum which we have at disposal for our first tritration shall occupy not less than 1–2 cm. of the stem of our capillary pipette. We may assume for the sake of fixing our ideas that it occupies a length of exactly 2 cm. In such a case we make a mark with a red wax pencil upon the stem of the pipette at a point about 2½ cm. above the end of the pipette. Having done this, we turn up the point of the pipette and allow the serum to run down the stem of the pipette up to the point which is indicated by the red pencil mark. The object of this manœuvre is to take an air-bubble index into the point of the pipette. Having done this, we proceed to dip the end of the capillary pipette into a drop of our twenty-fold dilution of normal sulphuric acid, and we allow the acid to run up into the stem of the pipette until the upper margin of the air-bubble which separates the serum from the acid just reaches the red mark upon the stem of our pipette. It is obvious that when the air-bubble index reaches this point the quantity of acid solution which has been run up into the stem of the pipette will be exactly equivalent to the amount of serum which was drawn off into the pipette. Having thus obtained exactly equal quantities of our serum and our tritrating acid, our next step will be to mix the contents of our capillary pipette. We can do this either by drawing up the contents of our capillary tubes two or three times through our mixing chamber, or, if our tube is unprovided with a mixing chamber, by blowing out the contents of our capillary pipette into a clean watch-glass and then re-aspirating them, after complete mixture has been effected, into our pipette. Mixture of the contents of our pipette, having been accomplished, we have only to blow out the mixture of serum and tritrating acid in a series of separate drops on to the surface of a strip of our red litmus paper. In the case of the particular mixture we are considering—i.e., in the case of a mixture consisting of equal volumes of serum and a twenty-fold diluted normal sulphuric acid—we should almost certainly find that we had in our mixture an excess of acid. We should then proceed in a precisely similar manner to tritrate with each other equal volumes of serum and a thirty-fold diluted normal acid. If we were dealing with normal blood this mixture might or might not have a slightly acid reaction. If this mixture proved to be still acid we should of course proceed to test equal volumes of serum and a forty-fold diluted normal acid. This mixture would, in the case of normal blood, almost to a certainty be alkaline. Supposing that it was alkaline, and that the reaction of the mixture of equal volumes of serum and thirty-fold diluted acid had proved to be acid, we should then proceed to mix in a clean watch-glass equal volumes of a thirty- and a forty-fold diluted normal acid. We should tritrate our serum again with this thirty-five-fold diluted normal acid. If we found that this quantity of acid just sufficed to neutralise the acidity of our sample of serum, it is obvious that the alkalinity of our serum would be most simply expressed by the fraction $\frac{N}{35}$. For a serum which is exactly neutralised by an equal volume of a thirty-five-fold diluted normal acid would obviously correspond in alkalinity to a thirty-five-fold diluted normal solution of alkali.

In a future communication I hope to draw attention to some results of therapeutic and diagnostic importance which have been obtained by the exploitation of this method of measuring the alkalinity of the blood. For the present it will suffice to put on record for the guidance of others who may be disposed to employ this method of measuring the alkalinity of the blood that the maximum value which has been found by this method for the alkalinity of the normal serum has been $\frac{N}{25}$. This result has been obtained only once. In the case of thirteen other normal persons the serum has been found to possess an alkalinity which has always varied between the values of $\frac{N}{30}$ and $\frac{N}{45}$. On the average the alkalinity of the serum has been equivalent to about $\frac{N}{35}$.

Netley.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF DILATATION OF THE STOMACH ASSOCIATED WITH PERIPHERAL NEURITIS.

(Under the care of Dr. WALTER CARR.)

A MAN, aged twenty-eight years, was admitted into the Royal Free Hospital on Nov. 20th, 1896. He said that since he was about sixteen years old he had been subject to occasional attacks of abdominal pain, lasting about twelve hours and not specially related to food. For some years these attacks were not attended by sickness, and the symptoms from which he suffered do not suggest that he had a gastric ulcer; neither had he ever swallowed any corrosive fluid. Since 1890 the attacks of pain had recurred about every two months, had been more severe, and had been terminated by copious vomiting. Since about Christmas, 1895, they had become much more frequent, sometimes occurring two or three times a week, with very severe pain; exertion seemed to increase their frequency. The patient said that before the attacks his stomach felt very uncomfortable and he could feel it "working" (evidently the peristaltic movements). After the sickness he was much relieved for a time. In June, 1896, his legs had begun to get weak, with much pain in the calf muscles, numbness and tingling in the legs and slightly in the hands; since August he had been unable to walk and had wasted rapidly. No history was obtained of any acute illness except influenza five years ago. He entirely denied any alcoholic excess, saying that he had rarely taken more than one or two glasses of beer a day. On admission the patient was seen to be a well-built man, about 5 ft. 11 in. in height, but greatly emaciated; his weight was 9 st. 7 lb. He had not been sick for a week, but the day after admission he brought up 7½ pints, and vomited from 1 pint to 2½ pints nearly every day for the next week; he also brought up much flatus. The vomit contained abundant sarcinæ, but no blood. The tongue was clean, the appetite fairly good, and the bowels acted nearly every day. On examination of the abdomen peristalsis was frequently visible, starting in the left hypochondrium and passing across the umbilical region to the right. On palpation no tumour, thickening, or resistance could be detected in the neighbourhood of the pylorus or elsewhere. The stomach was distended by giving bicarbonate of potassium and citric acid, and was found to be greatly dilated, reaching well below the umbilicus, though the exact limits could not be defined. The liver dulness was normal. In regard to the nervous system there was no complete paralysis of any limb, but his legs were very weak, especially the left, and he was unable to extend the left toes. He could only walk very feebly, requiring a great deal of support. He could just stand alone, but not when the eyes were shut. No other evidence of ataxy was detected. All the muscles of the legs were much wasted. In the upper limbs wasting was especially marked in the supra- and infra-spinati and the interossei. In the muscles below the knees no reaction was obtained to faradaism, but all the muscles reacted to the galvanic current. He complained of tingling and numbness in the legs, and the calf muscles were very tender. There was very slight impairment of sensibility below the knees, chiefly about the feet. No girdle sensation was present. The knee-jerks and plantar reflexes were absent. There was no loss of sexual power or of control over the sphincters. His pupils were normal and no ophthalmoscopic changes were found. His chest was healthy. The temperature was normal throughout his stay in the hospital. The urine contained no albumin or sugar.

The patient was kept in bed and carefully dieted; he was given hot water to drink before each meal, little or no fluid being allowed with the food; strychnine

was given by the mouth. From Nov. 28th the stomach was washed out every morning, at first with simple warm water and afterwards with a solution of bicarbonate of sodium (two grains to the ounce), which seemed to act rather more beneficially. At first a large quantity of very offensive sour-smelling mucus and grumous material was brought away, but this rapidly diminished, and after a few weeks the washings each day returned quite clear. The effect of the treatment was immediate, the vomiting ceased after the first washing, only recurring occasionally afterwards, chiefly when the patient began to get up, movement seeming at first to excite it. The appetite improved, the flatulence diminished, and he began to gain weight. The nervous symptoms also steadily improved, the legs got stronger, so that the patient began to walk alone, sensation became normal, and the tenderness of the calf muscles slowly subsided. He was discharged on March 7, 1897, greatly improved in every respect and having gained 18 lb. in weight. He was seldom sick, and his appetite was good; there was still some flatulence, but much less than before. He could walk well and all the nervous symptoms had disappeared, except that there was still some weakness of the extensors of the left toes and the knee-jerks had not returned. He had learned to wash out his stomach himself without any difficulty and was directed to do so every morning before breakfast. He was seen on May 3rd and had then not been sick for six weeks; he was feeling well and much stronger; he could move all the toes quite freely; the knee-jerks were still absent; his weight was 11 st. 4 lb., a further gain of 7 lb. since leaving the hospital.

Remarks by Dr. WALTER CARR.—The above case presents several features of interest. The diagnosis of dilated stomach was obvious from the quantity and characters of the vomit as well as from the examination of the abdomen. Its causation, however, is obscure. The marked visible peristalsis, indicating hypertrophy of the muscular coat, points doubtless to the existence of definite obstruction at the pylorus, and hence mere chronic catarrh as a possible cause of the dilatation is probably excluded, even were it at all likely to lead to such great enlargement in a young and previously very robust man leading an outdoor life. All the ordinary causes of pyloric obstruction can also with reasonable confidence be excluded; there is nothing to suggest that there has ever been any peritonitis leading to displacement or narrowing of the pylorus; malignant disease is, of course, out of the question; a gastric ulcer near the pylorus might no doubt have led in healing to narrowing of the orifice, but the patient's early gastric symptoms, so far as he remembers them, were not suggestive of ulceration, which is, moreover, exceedingly improbable in an otherwise healthy lad of sixteen, at or before which age abdominal pain, without any vomiting, was first complained of. It is well known that when gastric dilatation occurs in comparatively early life the cause is often obscure, and I think that in this, as in some other similar recorded cases, a congenital obstruction or kink at the pylorus may possibly be present. The narrowing is probably but slight, and consequently symptoms only arose slowly, some hypertrophy of the muscular coat being sufficient for a long while to overcome the obstruction; but as soon as food began to be retained for a considerable time fermentation would occur, and the gases evolved, by distending the stomach, would lead to more rapid increase in the dilatation and so to the development of the characteristic symptoms. Some such theory as this best explains, I think, the commencement of gastric symptoms in early life, the gradual but steady increase in their severity, and the very great dilatation ultimately attained. There is no need to emphasize the excellent results of the treatment by lavage; improvement began after the first washing, and all kinds of medicinal and dietetic treatment had been tried previously without the slightest benefit. If there be permanent pyloric obstruction the washing out will doubtless have to be continued for an indefinite time, but this is not a serious matter, as the patient seems rather to enjoy it than otherwise.

As to the nervous symptoms, the partial but symmetrical affection of both motion and sensation, the tenderness of the muscles, the loss of the knee-jerks, together with the absence of girdle pain or of any affection of the sphincters or pupils, presented a sufficiently characteristic picture of peripheral neuritis, a diagnosis confirmed by the complete recovery. The chief interest of the case, however, centres in the causation of this neuritis; undoubtedly, the symptoms strongly suggest the alcoholic variety, but the patient's appearance and his behaviour whilst in hospital certainly did not point to any alcoholic excess, and I see no reason for doubting his statement that he rarely took more than a glass or two of beer a day. In this opinion his regular medical attendant (Mr. Greeves, of Willesden), under whose care he had been for a long time, entirely coincides. The patient had not suffered from any of the acute specific fevers, nor had he been exposed to any other probable cause of multiple neuritis so far as could be ascertained; and from the way in which the nervous symptoms developed as the gastric troubles increased, and began to improve as soon as the stomach was washed out, I am disposed to attribute the neuritis to absorption of the products of bacterial fermentation from the greatly dilated stomach. There seems nothing improbable in this view, although I am not aware of any previous cases having been recorded. For a long period, probably some years, large quantities of toxic substances must have been formed in the stomach, and some would doubtless be absorbed; and there seems no reason why they should not exercise a special action on the nervous system similar to that of the many poisons, organic and inorganic, which are recognised as possible causes of multiple neuritis. Of course, it may be argued that if the neuritis arose from this cause other similar cases ought by this time to have been recorded; but be it remembered, in the first place, that excessive dilatation of the stomach, persisting for any considerable time, is by no means a common condition (the most frequent cause of great dilatation is probably pyloric cancer, and this is necessarily fatal in a comparatively short period); and secondly, that alcohol and the toxins of the acute specific fevers (except diphtheria) cause multiple neuritis in only a very small minority of the cases in which they are present, and that similarly the poisons generated in a dilated stomach may only attack the nerves in an extremely small percentage of cases. Dr. Henry Waldo, of Bristol, has recorded [1] a case of peripheral neuritis in a girl, aged twenty-one years, following upon symptoms of poisoning after eating tinned salmon. He attributed the neuritis to the salmon and not to any metal. If this conclusion be correct, there seems no reason to suppose that if the products of decomposition of food outside the body can lead to neuritis, those formed as a result of its retention in the stomach should not at times exercise a similar action.

MELBOURNE HOSPITAL.

A CASE OF RUPTURE OF THE LIVER; OPERATION; RECOVERY.

(Under the care of Dr. W. MOORE.)

IN the less severe ruptures of the liver, which are not accompanied by such an amount of hæmorrhage as to prove rapidly fatal, collections of blood and bile tend to form, and should the laceration of the organ have been on its upper surface, adhesions between the liver and the anterior abdominal wall may so shut in the effused fluids that the general peritoneal cavity escapes. The implication of the right pleural cavity is by no means unusual in the partial ruptures of the upper surface of the liver. A case in many respects similar to the one recorded below was brought before the West London Medico-Chirurgical Society [2] by Mr. W. H. Battle in 1894.

A boy, aged eleven years, was admitted into the Melbourne Hospital under the care of Dr. W. Moore on May 31st, 1897. The patient had been kicked by a horse on the right side—the lower part of the (lateral) thorax—two days prior to admission. He was seen soon after the accident by a medical man, who found him completely collapsed and complaining of great pain in the right side; the diagnosis made was rupture of the liver. In four or five hours after the accident the abdomen had become distended, and this condition lasted about five days, but during these five days there were no other marked symptoms; the bowels acted after enemata. Four days prior to admission vomiting set in and had since continued. It was on account of this condition that he was sent to the hospital, as the medical attendant thought that the vomiting was due to

[1] Brit. Med. Jour., vol. i., 1889, p. 589.
[2] THE LANCET, May 19th, 1894, p. 1252.

pressure on the duodenum or pyloric end of the stomach, and that an operation might be required. The vomited matter was always fluid and of a greenish colour, with specks of blood in it. The bowels had not acted for four days in spite of the administration of enemata and of purgatives. The patient suffered from pain at times, which appeared to come on in spasms. There was no pain at the time of admission. On examination the patient was found to be a pale, thin boy. His temperature was 98·6° F. and the pulse was 110, of small volume, and easily compressible. He lay on his back with his knees drawn up. There was no abdominal distension, but there was some fulness in the hepatic region, and the liver dulness was increased. On percussion there was marked tenderness over the liver. He was kept in bed, and hot fomentations were applied over the upper part of the abdomen. For some days the boy presented no symptoms of importance. The vomiting ceased, his bowels acted, and the temperature was normal. But on June 6th it was noticed that his respirations were much quickened, and on examination it was found that there was a large rounded swelling below the ribs and just to the right of the mid-line; the liver dulness was greatly increased, and there was dulness over the right side almost up to the clavicle; the abdomen was somewhat distended and tympanitic. Two days later these conditions were slightly more marked, but it was noticed that the liver dulness was little increased downwards in the mid-axillary line. The temperature was slightly raised. On the 8th the chest was aspirated in the sixth right interspace, and twenty-four ounces of yellowish green (bile-stained) fluid were drawn off. This fluid was subsequently found to contain bile. The chest at once became resonant on the front and in the axilla. The prominence in the epigastrium became slightly less. During the next two days there was no improvement in the patient's condition; his pulse was quick, feeble, and irregular; he was very pale, and in the epigastrium, a little to the right of the mid-line, the rounded swelling had become very prominent and distinct. The margin of the liver could be felt about two inches above the umbilicus. His abdomen became greatly distended all over and tympanitic except in the epigastric and right hypochondriac regions. At this time he generally lay with his knees drawn up. On the 10th, under chloroform, Dr. Moore made a three-inch vertical incision through the rectus muscle a little to the right of the mid-line, commencing just below the ribs. The parietal peritoneum appeared to be much thickened, and on opening it a cavity containing a large quantity of dark fluid, in which clotted blood and bile could be easily distinguished, was entered. This cavity was very large, at least six inches deep, and it extended upwards towards the diaphragm. The upper convex surface of the liver could be felt forming its lower boundary, and it was shut off from the general peritoneum by adhesion of the liver to the anterior abdominal wall. The cavity was washed out with warm boracic acid lotion and drained with strips of iodoform gauze. Four horsehair sutures were used to close the ends of the incision. The wound was dressed with dry antiseptic dressings. Even after this the boy's condition was not satisfactory. The discharge from the wound quickly diminished, and in a few days almost ceased. The temperature was slightly raised, there was no increase of dulness in the front of the chest or in the axillary region, but the epigastric fulness was well marked, and now it appeared to fluctuate distinctly. On the 16th a hypodermic needle was introduced through the wound and a little thin, dark, bile-like fluid was drawn off. Just before he was taken to the operating room on the following day he was seized with vomiting and his temperature rose to 103·6°. He was anæsthetised, and a trocar and cannula were introduced through the wound into the fluctuating swelling in the epigastrium, and dark fluid bile flowed through the cannula. The cannula was removed and a forceps was introduced, opened, and withdrawn to enlarge the opening; in this way a very large quantity, probably several pints, of fluid was evacuated. A large rubber drain-tube was introduced and left in. From this time the patient rapidly improved; he became less pale, his breathing was easier, and the fulness in the epigastrium disappeared. The discharge of bile was very profuse for about a week; the tube was removed on the 22nd; on the 27th the discharge was much less and he was allowed to be up. By July 5th the discharge had ceased altogether and the boy left the hospital.

Remarks by Dr. MOORE.—In this case it is evident that the kick caused a rupture of the liver on to its upper (diaphragmatic) surface; through this rupture bile and blood were slowly effused, but they were shut off from the peritoneum by adhesions, which developed rapidly before the effusion had become great in amount. The wound on the surface of the liver healed, but a cavity was left in the substance of the organ into which the torn bile-ducts poured their contents. Some of the bile that had escaped through the tear in the surface of the liver found its way through the diaphragm into the right pleura and gave rise to a pleurisy with effusion. There were thus three separate collections of fluid—viz., in the right pleura, in a space formed between the diaphragm, the convex surface of the liver, and the anterior abdominal wall; this commenced to form immediately after the accident, and probably did not increase in amount after the first twenty-four hours; and, lastly, in a cavity within the liver; this last collection no doubt went on slowly increasing until it was evacuated. In the *Australian Medical Journal* for 1891 a somewhat similar case is briefly recorded by the writer. "A man, aged thirty-three years, was admitted into hospital on April 30th, 1891, having been crushed between two lorries. He complained of abdominal pain and tenderness, particularly over the liver. There was an abrasion of the abdomen between the ribs and the ilium on the right side and another just below the angle of the scapula on the left side. The pain was not very severe; his pulse was not quickened; flatus passed by the bowel during the next three days. On May 3rd he was attacked with vomiting, his skin became sallow, not jaundiced, and the liver dulness was found to extend to the crest of the ilium. His bowels were open after enemata, but the character of the motions was not noted. The following day his temperature was 99·8°, this being its first rise. On May 7th his temperature was 101°, and the pain was much more severe. From this time the dulness below the liver gradually diminished, whilst dulness began to extend gradually upwards over the chest on the right side until it reached the clavicle. For some days the patient refused to have anything done. On May 20th I aspirated in the mid-axillary line between the fifth and sixth ribs, and drew off forty ounces of dark-coloured bile. On May 23rd twenty-eight ounces of similar fluid were withdrawn. The breathing gradually improved and the dulness diminished. The patient was discharged on June 22nd with some impairment of mobility of the right side of the chest. Here there must have been a partial rupture of the liver; the torn bile-ducts poured their contents into the cavity thus formed; this cavity gradually increased in size and finally burst, probably by a very small opening through the diaphragm."

Reviews and Notices of Books.

The History of Intellectual Development on the Lines of Modern Evolution. By JOHN BEATTIE CROZIER. Vol. I. London: Longmans, Green, and Co. 1897.

DR. BEATTIE CROZIER, whose previous treatise, "Civilisation and Progress," met with a reception some few years ago that is but rarely accorded to works of philosophy, has now given to the public in his new book an expansion of one side of this great theme. In "Civilisation and Progress" he contented himself with setting out in a general way the parts played in the complex movement of civilisation by the cardinal factors of religion, government, science, and material and social conditions, and to pointing out the laws which regulate the interplay of these factors—a fairly large programme, but students of philosophy well remember how thoroughly and yet how simply it was carried out. In the volume now before us, and in those volumes projected by the author to follow it, he proposes to apply the general principles he has already laid down in "Civilisation and Progress" to the detailed consideration of one great feature in that civilisation—namely, intellectual development. Under this term he includes religion, science, and philosophy, and the purport of his work is to show that the human history of these three departments of intellectual development can be shown to

follow scientific laws. In other words, Dr. Beattie Crozier will attempt to prove, and is convinced while so doing of the possibility of proving, that the views held by, for example, Plato, Aristotle, Buddha, and St. Paul could have been anticipated; that their teachings on the great problems of human life were not only such as they were likely to hold, having regard to their environment rather than their individuality, but were such as in accordance with definite though still undiscovered laws they must have held.

To the execution of his heavy task the author brings certain important qualities likely to ensure success. He has learning, eloquence, and humour, so that he is able to instruct us by his comprehensive surveys of the history of the supreme intellectual movements of the world, and at the same time to hold our attention for long spells—a most important thing in a book of reasoning—and to drive home his teaching by some apt allusion or homely simile which stays by us, and epitomises for us many pages of solid argument or exhaustive reference. Here, for instance, is a happy allusion to the philosophy of Hegel, who may be said to have held with Kant that an assertion can be at the same time true and false, and that the opponent who was contradicting him might be equally in possession of truth with himself. Of this vague and illusory philosophy Dr. Crozier says: "Although his [Hegel's] law was in my judgment the true law of the movements of intelligence in the abstract, it was, nevertheless, like a hat too big for the head, altogether too wide and general to be of any scientific value for determining the line of evolution of the lesser divisions of intellectual development, except, perhaps, in relation to German metaphysics, from which, indeed, the law was derived, and to which it is specially applicable; in the same way as the general law of evolution, although, doubtless, true in itself, is much too wide to be offered as a serious explanation of the special phenomena of the Stock Exchange." Nor do the qualities we have mentioned alone recommend Dr. Crozier's work to our notice. In addition, he has employed a very sound and modest plan. In his materials he has gone direct to the original authorities living at or about the time of the events recorded, and then, with the object of "repairing the gaps and oversights inevitable in the view taken of any large and complex subject by a single mind," has had recourse to those great modern authorities who themselves drew from the original fountain heads, in particular to the works of those who have devoted themselves to the elucidation of some single historic period or school of thought and to the authentic lives of men who have made epochs in the story of civilisation. This is the model way to present obscure and difficult themes, particularly themes the consideration of which will necessarily occupy much time. Seeing the whole subject through the author's eyes the reader obtains a comprehensive grasp of it, benefiting by the uniformity of treatment which one mind, if logical, would necessarily use in dealing with similar historical events, whatever their date, origin, or issue. The good of specialism is in this way retained and the ill rejected. At the same time the authorities quoted by the author in his support or criticised by him in defence of any departures from their teachings, can be examined by the reader for himself. He is not asked to follow any lead blindly. Such and such are the deductions made by the author. Are they correct in view of what more special workers have to say? If they are not, have the authorities blundered or has the author misinterpreted them?

The present instalment of Dr. Crozier's work covers a consideration of the evolution of Greek and Hindoo thought, of Judaism, and of the evolution of Christianity. He treats all four sections dispassionately, and gives to each impartially what he considers to be its proper importance in the scheme of intellectual development. The story of the evolution of Christianity is in length equal to the stories of the other three put together, although we are only taken as far as the end of the second century; but this is intelligible if only because much of the work that still lies ahead of the author is necessarily a continuous narrative of the Christian religion, while the influences of the Greek, the Hindoo, and the Jew are for all practical purposes over and done with. To what extent Dr. Crozier has performed the task that he has set himself—viz., the complete application of the theories of evolution to the intellectual development of the human race—we leave to the judgment of our readers. We have said plainly what we think of his qualities for the due performance of the work and of the spirit in which he has approached it, but it is to the minds of individual readers that he appeals. To some he will appear more convincing than to others, while many may desire to reserve their opinion until the author has written of Mediæval Catholicism, the Renaissance of Learning, the Reformation and the Doctrines of Modern Science, to mention some of the sections which remain to be dealt with. And this last is our own position. Until these important landmarks in the survey of the world's progressive wisdom have been considered by Dr. Crozier, their importance estimated, and their results traced, it is not possible to say how far he has accomplished his intention—that is to say, how far he has been able to show the existence of a law comparable to a scientific law governing the thoughts of men and dictating creeds and their schisms, philosophies and their accompanying facts and fallacies. Criticism at this stage would hardly be fair, as the author may be intending by something he has yet to say to repair what now might seem to be oversights in the presentment of his large and complex labour. An obvious inconsistency may, for example, be found in this volume which will probably be accounted for later, being doubtless an inconsistency in phraseology and not in thought. The author, while designing, as we understand him, to explain or account for the progress of intellectual development in accordance with more or less logical rules—while, that is, applying the general principles by which civilisation has progressed to the detailed evolution of one great factor of that civilisation—imports into his philosophy a coördinating power of unknown force and incomprehensible energy "which is not ourselves and which makes steadily for moral ends," and which directs by "its overarching supernaturalism everywhere enfolding and pervading the world and its affairs" every step that is taken by poor belated man. That we are under such direction is the happy belief of all the devout whatever their creed and of most who lead lives of thought and introspection; but it would almost seem that Dr. Crozier, by admitting the presence of this mysterious force into his calculations, has made it impossible for himself to explain the very problems to unravel which his book has been written. For if he allows himself to be helped in his explanations by falling back upon a First Cause of which he knows nothing, however implicit may be his private trust in its unlimited power, we can always ask him to tell us exactly which episodes in his story are consequential one to the other—the inevitable result of cause and effect working according to definite law—and which must be set down to the caprice of the supreme and unknown X.

Dr. Crozier has written an excellent book. He deals with his great subject lucidly and modestly, with no priggishness or unnecessary display of erudition, and with no slipshod uncertainty of expression. All can read him, and it is not his fault if all cannot understand every word he has written. He has our hearty congratulations on his work as far as it has gone.

Twentieth Century Practice: an International Encyclopædia of Modern Medical Science by Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D. Volume VIII., *Diseases of the Digestive Organs.* 1897. London: Sampson, Low, Marston, and Co. Pp. 667.

THIS vast publication has now reached the eighth volume; and twelve more are yet to come, and if all the volumes are as complete in their respective subjects as the one now under consideration the work will be a library in itself.

The first article is under the joint names of Dr. Johann Mikulicz, Professor of Surgery at the University of Breslau, and Dr. Werner Kümmel, also of the same university. The subject is Diseases of the Mouth. After a short introduction, containing the anatomy of that region, good accounts are given of the "general symptomatology" and "special pathology" of affections of the mouth. We then find a description of some of the injuries to which the mouth is liable, including burns. The various diseases of the mouth are then considered, chiefly under the headings of Latin names, such as stomatitis simplex, ulcerosa, and aphthosa. Rare conditions are also described, such as scleroderma and actinomycosis.

Diseases of the Œsophagus are described by Dr. Reginald H. Fitz, of Boston. With the exception of tumours of the œsophagus this is a difficult subject to write upon, but Dr. Fitz has produced an interesting and instructive article.

Dr. Einhorn, Instructor in Clinical Medicine at the New York Post-Graduate Medical School, contributes a long article on Diseases of the Stomach, occupying 250 pages; it really forms a valuable monograph on the subject. Here, again, we notice Græco-Latin terminology freely employed; some of the names will, we think, be new to English readers, such as "hyperchlorhydria" (hyperacidity), "gastrosuccorrhœa continua periodica," and "gastrosuccorrhœa continua chronica." By the first term is understood "an affection which is characterised by a constant secretion of gastric juice giving rise to spells of vomiting and severe pains," and by the second term a condition in which there is a constant secretion of gastric juice even when there is no food whatever in the stomach. A diagnosis of either complaint can only be made with certainty by a repeated examination of the stomach in the fasting condition by means of the tube. Another condition described is "achylia gastrica" or "atrophy of the stomach," a condition in which there is a persistent absence of gastric secretion. Again, in order to diagnose this condition the patients have frequently to undergo the unpleasant operations of the passage of the stomach tube. Next we are confronted with the term "ischochymia," or "a condition in which the stomach is never found empty between meals, but always contains some food, even in the fasting condition." Here, again, "this condition is best recognised by the examination of the stomach by means of the tube when fasting." In our opinion an unnecessary burden would be thrown on the physicians in the out-patient rooms of our hospitals if diagnosis had always to be made by means of the stomach tube. As it is, we prefer to ask our patients certain questions as to the relation between pain and food as regards to time, and the presence or absence of vomiting, &c., and then, according to their replies, we write our diagnosis. This may not be so scientific, but it is certainly more practical, and as regards treatment the patient is just as well off. In reading through Dr. Einhorn's paper we stumble across such terms as "acoria," sometimes spelt with a "c" and sometimes with a "k," "polyphagia," "parorexia," "vomitus nervosus," "pneumatosis," "hypanakinesis ventriculi," "hyperanakinesis ventriculi," "tormina ventriculi nervosa," &c. Dr. Einhorn's paper, in addition to being a most elaborate disquisition on the diseases of which it treats, is also a remarkable study in medical nomenclature. Elaborate directions are given for the examination of the stomach by means of various forms of apparatus, especially Einhorn's "gastrodiaphane," "stomach bucket set," and "gastrograph." Truly, the physician of the future will have his pockets full if he carries about all his modern apparatus. Reviewing this article as a whole, we must give all due praise to the thorough manner in which each gastric disorder is described. It contains a large amount of original work and terminates with a copious bibliography.

The article on Diseases of the Pancreas is by Dr. Hans Levi, Professor of Internal Medicine at the University of Bonn. In his introduction the author points out that our knowledge of diseases of the pancreas is of recent date owing to the comparative rarity of these diseases, to the hidden situation of the organ, and to the fact that we have hitherto had a not very exact knowledge of the functions of the gland. The methods employed for the diagnosis of pancreatic disease are well described, and a fair summary is given of the diseases of the organ so far as we are acquainted with them.

Diseases of the Peritoneum are described by Dr. Farquhar Curtis, Professor of Clinical Surgery, New York Post-graduate School. The embryology, anatomy, and physiology are all considered at length, and then the diseases are taken in the following order: peritonitis, appendicitis, perforation of the stomach and intestine, peritonitis originating from the female generative organs, subphrenic abscess, tuberculous peritonitis, ascites, and tumours. Especially good is the section on appendicitis, the anatomy of the appendix being very complete. Dr. Curtis has produced a most useful paper, which adds considerable value to the publication as a whole.

The article on Animal Parasites and the Diseases Caused by Them is written by Dr. D. J. C. Huber, of Memmingen, Bavaria. Dr. Huber's writings on this subject are well known, and a better author for this subject could not have been chosen. The descriptions of the parasites are lucid and the illustrations well executed.

Treatment of the Diseases Caused by Animal Parasites is from the pen of Dr. James M. French, Lecturer on Morbid Anatomy and Demonstrator of Pathology at the Medical College of Ohio, and contains much useful information.

LIBRARY TABLE.

Dangerous Infectious Diseases. By FRANCIS VACHER, Medical Officer of Health of Cheshire. Reprinted from the *Sanitary Record.* (London: The Sanitary Publishing Company, Limited. Price 1*s.* 6*d.*)—This little book is a reprint of a series of articles originally intended for the use of newly appointed medical officers of health, and also, we should say, from the simple style of its matter, to aid heads of households in the early recognition of an infectious fever so that they may call in medical assistance as soon as possible. The grouping of the different fevers is, as the author admits, quite unscientific, they being classed according to the generally recognised length of the incubation period. It will easily be seen, however, that this method of classification may in many cases be very useful. The question of treatment other than preventive does not come within the scope of this book, but the directions as to disinfection and the probable sources of infection of diphtheria and enteric fever are clearly set out. We would suggest one slight amendment, and that to mention that the papules in small-pox appear on the backs of the wrists quite as soon as, if not sooner than, on the face (vide p. 6).

The Blight of Respectability. London: The University Press, Limited. Price 2*s.* 6*d.*—This book is a rather amusing if not very well written diatribe against things as they are.

The author's great *bête noir* is what he calls "respectability," i.e., what the majority of people do and think, and as an instance he quotes the case of the woman mortally wounded in a railway accident who with her dying breath asked the surgeon to put her bonnet straight. Vanity of this sort is nothing new, however, for we all remember Pope's Narcissa, who wished to be rouged when dying. There are grains of wheat among the chaff. Witness the following: "There was a time when trade meant a handicraft; now it is a term for gambling with articles made by ill-rewarded workers." This, we fear, is in many cases true, and due to the craze for cheapness.

JOURNALS AND REVIEWS.

The Journal of State Medicine. London: Baillière, Tindall, and Cox.—The official organ of the Royal Institute of Public Health for September opens with the third of Dr. G. Sims Woodhead's Harben Lectures. A paper read at the Congress of the British Institute of Public Health in Glasgow by Mr. William Mitchell, vice-chairman of the School Board of Glasgow, in which he enters a plea for improved dwellings and improved social conditions for poor children, will be read with interest. To a want of proper housing for children and the nature of their environment the author attributes the unsatisfactory results of School Board work, which is "not at all commensurate with its scope and intention and with the expense and labour and care that are lavished upon it." Finally, the author commends the preamble set forth by our forefathers more than 300 years ago in the education scheme of 1560: "Of necessitie it is that your honours be most cairful for the virtuous education and godlie upbringing of the youth of this realm."

The Quarterly Journal of Microscopical Science. Vol. XL Part 2. August, 1897. Edited by Professor E. RAY LANKESTER Professor ADAM SEDGWICK, and Professor W. WELDON. London: J. & A. Churchill. Price 10*s.*—This part contains six articles:—1. The Adhesive Tentacles of Nautilus, with some notes on its Pericardium and Spermatophores, by Arthur Willey, D.Sc., with a plate. The cylindriform tentacles are shown to form firm adhesions by their surfaces, not by their tips. The spermatophore sac is at the base of the buccal cone. The author gives a tribute of praise to the precision of the late Professor Huxley's description of the pericardial region. 2. On Some Modifications of Structure subservient to Respiration in Decapod Crustacea which burrow in Sand, with Some Remarks on the Utility of Specific Characters in the Genus Calappa and the Description of a New Species of Albunea, by Walter Garstang, M.A., Oxford, with three very beautifully executed plates. 3. Note on the Anatomy of Sternaspis, by Edwin S. Goodrich, B.A., of Oxford, with two plates. The text gives an account of various internal organs of this Polychæte worm, which are illustrated by numerous figures. 4. On the Relation of the Arthropod head to the Annelid Prostomium, by Edwin S. Goodrich, B.A. This is an article that will prove of great service to those who are working at the morphology of the Invertebrata. There are many illustrations. 5. On the Development of the Californian Hagfish, Bdellostoma Stouti, Lockington, by Bashford Dean, Ph.D., Columbia College, New York, with a plate. In this article it is shown that the Myxinoid differs widely from all other chordates in its developmental type. He claims for it, on developmental grounds, a high antiquity. 6. On the Diplochorda, by A. T. Masterman, B.A., B.Sc., St. Andrews, N.B., with nine plates. An account is here given of the structure of Actinotrocha and of Cephalodiscus.

Liverpool Medico-Chirurgical Journal.—The number for the current half year contains the Transactions of the Liverpool Medical Institution from Jan. 28th to April 22nd, many reviews of books, and nine original articles. Dr. J. Wiglesworth, superintendent of the Lancashire County Asylum at Rainhill, describes two cases of Porencephaly. Both patients were male epileptics. In the first, who was thirty years old at the time of death, the right cerebral hemisphere was congested but otherwise normal; in the left hemisphere there was a considerable loss of substance in the region occupying the upper part of the ascending limb of the Sylvian fissure. The other patient was an idiot of a very low type, and died from phthisis in his twenty-first year; the cerebral substance had almost disappeared over the posterior two-thirds of the brain. Mr. F. T. Paul publishes a successful case of Gastrostomy by Frank's method. In the result the patient, who was a woman, forty-two years of age, suffering from stricture of the œsophagus, looked forward to her meals and her cup of tea with as much relish as the other patients, or even more.

Scottish Medical and Surgical Journal.—Dr. William Stewart, surgeon to Leith Hospital, describes a case of Epileptiform Convulsions and Hemianopsia due to unilateral hydrocephalus and treated by drainage of the lateral ventricle. The patient was a man twenty years of age. He first complained of defective vision in 1888 and had his first epileptic fit in April, 1894. The operation was performed on Oct. 1st, 1896. On incising the cerebral tissue a large cavity was opened, from which much fluid, having all the appearances of cerebro-spinal fluid, escaped. A small indiarubber drainage-tube was introduced and retained till the eleventh day. The wound being soundly healed, and the patient having had no fits, he was discharged on Nov. 24th, seven weeks after the operation. The fits having recurred on April 7th, six months after the operation, the old flap was reflected on April 22nd, a drainage tube introduced, and retained till June 13th; on June 16th the wound was firmly healed. Dr. William Russell, the editor, writes on Migraine and Allied Epileptoid Conditions. Dr. Norman Walker contributes a clinical lecture on the Common Fungus Diseases of the Skin.

Edinburgh Medical Journal.—Dr. T. Myles, surgeon to the Richmond Hospital, Dublin, publishes several cases of Nephrectomy and Nephro-lithotomy, together with an account of Experiments with the Roentgen Rays in the diagnosis of renal calculus and a careful exposition of the difficulties and dangers of the operation of needling the kidney through the abdominal wall. Mr. H. J. Waring (London) describes the treatment of Gangrenous Hernia by resection and immediate union of the intestine, with an account of two cases. Dr. J. C. Webster, McGill University, Montreal, criticises recent views regarding Lateral Deviation and Rotation of the Uterus. Dr. Charles Steele records a case of Retinal Hyperæsthesia in which recovery followed seven weeks' confinement to an absolutely dark room. There are three other original articles.

Dublin Journal of Medical Science.—The opening article is one on the Use of Ergot in Obstetrics. The author, Dr. T. More Madden, is in favour of employing it freely, in full doses, under certain conditions which are carefully described.

Archives of the Roentgen Ray. London: The Rebman Publishing Co., Limited, 11, Adam-street, Strand. July, 1897. Price 4*s.*—This useful publication has now become a quarterly record of the proceedings of the recently formed Roentgen Society, and in its columns it is intended to publish original communications, notes, and correspondence bearing upon the new radiations, chiefly, of course, in their application to medical diagnosis. The present title adopted is obviously better chosen than the old one, which was "Archives of Skiagraphy." The first number thus issued under the auspices of the new society contains original papers on "The Nature of Roentgen's Rays," by Professor Silvanus P. Thompson; on "Roentgen Rays: a Survey, Present and Retrospective," by W. S. Hedley, M.D. Edin., the latter contribution being an excellent *résumé* of the

evolution and history of the x rays. These papers are followed by short descriptions of several cases, which are illustrated in some excellently reproduced skiagrams in a series of plates at the end of the number. The new journal is edited by Dr. W. S. Hedley, and Mr. Sidney Rowland, the editorial committee consisting of Dr. Mackenzie Davidson, Dr. John Macintyre, Mr. Thomas Moore, F.R.C.S. Eng., Dr. Morton, Mr. Campbell Swinton, Mr. Lynn Thomas, F.R.C.S. Eng., Dr. Norris Wolfenden, Professor Silvanus Thompson, and Dr. W. White.

Analytical Records
FROM
THE LANCET LABORATORY.

ÆSCULAP.

(THE ÆSCULAP BITTER WATER CO., LIMITED, 51, FARRINGDON-STREET, E.C.)

ÆSCULAP bitter water presents a composition analogous to most of its kind that are found in Budapest. It contains, according to our analysis, the sulphates of magnesium and sodium in nearly equal proportion. The analysis which we recently made is as follows, the results being expressed in grammes per litre: magnesium sulphate, 17·70; sodium sulphate, 16·77; calcium sulphate, 1·26; common salt, 2·50; and carbonate of soda, 0·56. Thus, whilst containing the purgative salts in approved proportion and relation to each other, it is also distinctly alkaline owing to the presence of carbonate of sodium, and in addition it contains a not unimportant quantity of ordinary salt. It is probable that it is the presence, though in small amount, of these latter ingredients which makes the administration of saline purgatives in a natural water more satisfactory than when the chemically pure sulphates are employed. The water acts mildly yet with good effect as an aperient.

BOVRIL STAMNOIDS.

(BOVRIL, LIMITED, 30, FARRINGDON-STREET, E.C.)

Bovril stamnoids are a very useful dietetic introduction. Each stamnoid weighs a little over ten grains and, as the following analysis will show, presents the composition of a real nutrient. Our analysis was as follows: organic matters 78·70 per cent., moisture 6·20 per cent., and mineral matter 15·10 per cent. The total nitrogen amounted to 10·84 per cent., which is distributed over 35·60 parts beef powder, 31·10 parts meat extractives (creatin, &c.), and 12·00 parts albuminous matter and peptone. The stamnoid slowly disappears in the mouth and leaves no unpleasant after-flavour. Indeed the stamnoids possess an attractive beef-like taste. They should prove extremely serviceable as offering a palatable and reliable source of nutrient in an easily portable form. To athletes, cyclists, and travellers who have recourse to temporary nourishment, and to those who are in the habit of taking a light form of nourishment between meals, they should prove invaluable since they sustain as well as stimulate.

PURE CONCENTRATED COCOA.

(J. S. FRY AND SONS, BRISTOL.)

This cocoa is characterised by its extreme miscibility with hot water so that its valuable food constituents probably occur in a condition easy of assimilation and digestion. Analysis showed it to contain 30 per cent. of cocoa fat, which means that a reduction has been effected in the amount of the indigestible fat in the cocoa bean by about one half. The mineral matter amounted to 6·05 per cent. and its alkalinity, reckoned as potash, to 2 per cent. Since the normal alkalinity of the ash of cocoa with half its fat extracted amounts to 5 per cent. it is highly probable that a small proportion of a salt which on ignition exhibits an alkaline reaction has been added, the cocoa itself not giving the slightest evidence of free alkali. This accounts for the high degree of the so-called solubility which this cocoa exhibits. The peculiar method of manufacture adopted undoubtedly increases its dietetic value.

PURE COCOA ESSENCE (CAMEL BRAND).

(PEEK BROTHERS AND WINCH, LIMITED, 20, EASTCHEAP, E.C.)

This essence possesses an admirable flavour and develops an attractive aroma in the cup. It is thoroughly miscible with hot water, and contains practically no coarse ingredients. This is clear from the fact that on mixing the cocoa with hot water the liquid remains practically without sediment for some time. Analysis gave the following results: fat, 30 per cent.; mineral matter, 4·21 per cent., exhibiting an alkalinity equal to 1·04 per cent. potash. The cocoa contains no free alkali, but by its method of preparation the mineral matter obtained on incineration is increased and, *pari passu*, its degree of alkalinity. From these results the general excellence of this cocoa must be admitted.

QUAKER OATS.

(THE AMERICAN CEREAL COMPANY, CHICAGO.)

Rolled oats or whole oats flattened into wafers are, as is well illustrated in "Quaker Oats," a distinct improvement on the ordinary preparations, since while the rolling process secures a more complete extraction of the valuable food ingredients in the making of porridge, on account of the increased extracting surface exposed, the fat at the same time does not appear to undergo any objectionable change. It is well known that, owing to the fat becoming rancid, the flavour of ordinary oatmeal deteriorates. In "Quaker Oats" this flavour would appear to be preserved for an indefinite time. That the oats selected for the rolling process are of a superior quality is evident from the following analysis which we recently made: starch, &c., 65·77; albuminoids, 15·43; fat, 8·00; mineral matter, 1·35 per cent.; moisture, 9·45 per cent. Thus "Quaker Oats" contain a maximum proportion of each of the food constituents which places the oat above other cereals in regard to nourishing and sustaining value. A glance at the above analysis will serve to show at once that this preparation represents a complete food, and by its peculiar mode of preparation its nutritive qualities are made more available.

ANTI-DIABETIC WHISKY.

(JOHN DEWAR AND SONS, PERTH, AND 48, LIME-STREET, E.C.)

The ground upon which this spirit is claimed to be suitable for use by the diabetic patient will be easily understood from the following results of analysis: extractive matters, 0·035 per cent.; mineral matter, *nil*; acidity calculated as acetic acid, 0·0096 per cent.; alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to proof spirit 83·54 per cent. The whisky, as might be expected, is pale in colour, but possesses the smooth and mellow flavour of a matured spirit. It is practically without extractives and acidity. The peculiar aroma and flavour of ordinary whisky is almost absent. In the present state of our knowledge in regard to diabetes, it is held essential that the patient should, if he drink whisky at all, only drink that which is of the purest kind and free from extractives and acidity. The spirit under analysis complies with these requirements, but its flavour necessarily suffers.

COMALTANA WINE.

(THE COMALTANA WINE CO., MARKET-STREET, HECKMONDWIKE, YORKS.)

The genuineness of this wine was abundantly established by the fact that it showed digestive action upon starch, which was more marked when the alcohol was removed by slow evaporation at a low temperature. Again, cocaine was easily isolated and identified. The wine is, in fact, a combination of

extract of malt and extract of coca leaf with port wine. Its alcoholic strength is somewhat below that of ordinary port, as will be seen from the following results, in which are included other items: alcohol, by weight 15·00, by volume 18·48, equal to proof spirit 32·38; extractives and sugar, 16·75 per cent.; mineral matter, 0·35 per cent. The wine possesses a strong malty flavour. It may be regarded as presenting the invigorating qualities of port wine added to the stimulating properties of the coca leaf and the nutritive as well as digestive qualities of an active malt extract.

EUCHININ.

(WIDENMANN, BROICHER, AND CO., 33, LIME-STREET, E.C.)

Euchinin is obtained by the action of chloro-carbonic ethyl-ether on quinine. With acids, in which it is freely soluble, it yields a solution exhibiting the fluorescent appearance of quinine in sulphuric acid. It is said to secure the therapeutic effects of quinine without introducing its unpleasant properties. Euchinin is stated not to disturb the appetite or to produce nausea. This new quinine combination is regarded as offering a satisfactory means of introducing quinine into the system when ordinary quinine leads to objectionable effects.

KRYOFINE.

(AGENCY: D. MISELL, 65 AND 66, BASINGHALL-STREET, E.C.)

To the already long list of new antipyretics must be added "Kryofine." Like phenacetin, it is a para-phenetidin derivative, and is, in fact, the condensation product derived from heating para-phenetidin with methoxyacetic acid. Phenacetin is aceto-para-phenetidin. "Kryofine" is said to effect a very decided reduction in temperature in febrile conditions, and is stated to be more certain than either antipyrin or phenacetin, and yet to have no unpleasant sequelæ.

NEW PHARMACEUTICAL PREPARATIONS (WARNER AND CO., PHILADELPHIA).

(AGENTS: F. NEWBERY AND SONS, 1 AND 3, KING EDWARD-STREET, NEWGATE-STREET, E.C.)

Some excellent formulæ are comprised in the following preparations:—Cascara Elixir, from which the inert and griping principles have been removed; Elixir Salicylic Comp., a sweet-tasting preparation containing pure salicylates for administration in acute rheumatism; and Tono Sumbul, a bitter cordial with quinine-like taste, containing chiefly the extractives of sumbul root combined with calisaya, iron, and phosphoric acid. The latter preparation is said to be a useful stimulant and tonic to the nervous system, as in hysteria, delirium, and asthma, and is to be taken in tablespoonful doses before meals; Sumbul, or musk root, is also combined with asafœtida, sulphate of iron, and arsenic, in the convenient form of elegantly-coated pills, and to the pill list also may be added the chalybeate pill of the composition of Blaud's pill—that is, containing protosulphate of iron and carbonate of potassium in molecular proportion. We found that on dissolving a pill in water interaction speedily took place, pure protocarbonate of iron resulting. The chalybeate pill is also prepared containing extract of nux vomica ½ grain; this latter is an excellent combination as a ferruginous tonic. Another useful formula in the form of a pill is that which contains sulphite of soda 1 grain, salicylic acid 1 grain, and nux vomica ¼ grain, which has been prescribed with good results in hyperacidity and disturbed digestive function. Lastly should be mentioned the granular effervescent preparation of hydrobromate of caffeine, which has been found valuable in the relief of nervous or sick headache. All these preparations are admirable specimens of the advances in pharmaceutical preparations.

New Inventions.

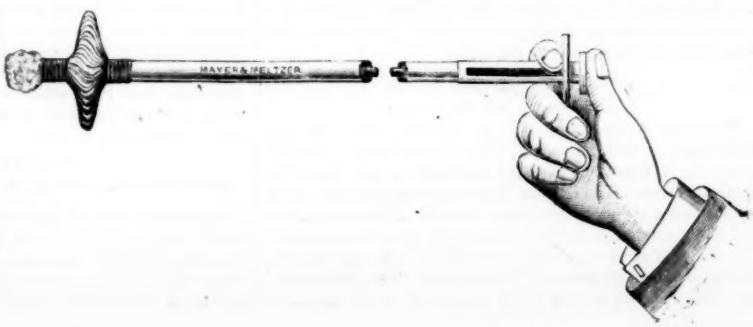
NEW HERNIA CORSET.

THE use of the truss or belt commonly employed at present in cases of umbilical hernia is attended with inconveniences which it is the object of this appliance to avoid. The instrument which I have designed for the purpose has the further advantage that it acts also as an abdominal bandage or support. It may be easily and readily applied and worn without discomfort. It is employed in combination with a corset, and consists of a spring, preferably constructed of a band or strip of sheet steel, and curved. The centre of the spring is attached to the lower end of one of the corset busks or to the lower end of an auxiliary busk or support such as is sometimes worn with corsets, with the concavity of the curvature outside. To the outer ends of the spring there are attached studs, buckles, buttons, or the like, to which straps may be secured. The straps which are used each have one end attached to the corset at a point about midway between the front and the back, or nearer to the front or back, and near the lower edge. At about the point of attachment of the spring to the busk a pad is secured so as to come upon the umbilical region when in use. This pad may resemble the pads used with umbilical trusses and will vary in construction to suit the particular hernia for which it is intended. In use, after the corset is in place, with the pad over the hernia, the straps from each side of the corset are connected with the ends of the springs and are adjusted until the proper degree of pressure is produced by the consequent flattening of the curvature of the spring. In removing the corset it will be necessary to detach only one of the straps from the spring. Gussets of elastic web may be inserted in the lower edge of the corset, and the straps, or a portion of them, may be made of elastic web or of coiled springs or the like. It can be obtained from Messrs. Arnold and Sons, London.

Blackpool. F. W. A. STOTT, M.A., M.B. Oxon.

AN IMPROVED ŒSOPHAGEAL PROBANG.

THE following modification of the umbrella probang has been devised with the object of obviating the well-known difficulties experienced in the use of the ordinary pattern—viz., the premature opening during insertion, and of opening and withdrawing, which necessitates the use of both hands. The probang is constructed in the usual way so far as the



bristles, catheter, &c., are concerned, but the end which is held by the operator is so arranged that the whalebone does not protrude, but terminates about an inch from the end of the catheter, and is fixed to a disc by a pin which passes through lateral slits in the catheter. When inserting the probang it is held by the end beyond the disc and so prevented from opening; it is then opened and withdrawn by pressing on the end with the thumb, as shown in the illustration. By this means one hand is free to steady the patient's head or to hold a tongue spatula or gag. Messrs. Mayer and Meltzer, of Great Portland-street, are the makers.

King's College Hospital, London. C. J. MAYHAW.

THE BATTLE OF THE CLUBS.

THE ACTION OF THE PROFESSION AT GREAT YARMOUTH.

AT a recent meeting of the Great Yarmouth District Committee of the Incorporated Medical Practitioners' Association it was decided to send a memorial to every licensing body in the United Kingdom calling attention to the evils and abuses at present existing in connexion with the administration of many clubs and medical aid societies, and if possible to procure an expression of opinion from the licensing bodies, on the conduct of those of their graduates or diplomates who, by holding appointments under such clubs or societies, aid, abet, and perpetuate the abuses and evils which exist in connexion therewith.

We publish this memorial below, thus bringing the matter prominently before the profession and to the cognisance of other local societies of medical practitioners, which may thus be led to coöperation and possibly to adoption of similar measures calculated to bring forcibly to the notice of the licensing and governing bodies the abuses now obtaining in connexion with medical aid societies, clubs, and hospitals.

TO THE { SENATE / COUNCIL } OF THE.....

We, the undersigned—being, with one exception, all the registered medical men engaged in private practice in Great Yarmouth—beg leave to bring the following facts under the notice of your { Senate / Council } as the governing body of one of the corporations entitled under the Medical Acts to grant { degrees / diplomas } qualifying their holders to practise medicine, surgery, and midwifery in the United Kingdom:—

1. In Great Yarmouth, as in other districts of the United Kingdom, certain grave abuses have grown up of late years in connexion with the systems of "Medical Aid" for the working classes organised by the friendly societies and by certain industrial life assurance companies, and other lay associations.

The principal abuses referred to are:—

(*a*) The admission of persons not needing such assistance to medical benefits intended primarily for the relief of the poorer classes.

(*b*) The admission of women and children to these benefits at entirely inadequate rates of payment for the medical officer.

(*c*) Specially in the case of industrial assurance and similar societies a system of indiscriminate canvassing whereby the private patients of other medical men are solicited—directly for the company, indirectly for its medical officer.

(*d*) The conduct of medical practice by lay organisations purely as a commercial speculation, this being most flagrant where, as in some cases, the medical officer receives a fixed salary; and beyond this amount the fees accruing from his work are appropriated as the profits of his non-medical employers.

2. For the purpose of checking these and similar abuses all but one of the medical practitioners residing in Great Yarmouth combined, and as one result of their association a joint request was made to the friendly societies for a conference with a view to an amicable adjustment of the matters in question, but with few exceptions the friendly societies absolutely refused this request, dismissed their medical officers, and proceeded to form a medical institute in the constitution of which all the above abuses are maintained and even increased.

3. The posts of medical officers to this institute were advertised in the lay press, and as a result, notwithstanding the condemnation of such methods of practice by the medical journals and by the general voice of the profession, and in spite also of the fact that those accepting these appointments must knowingly, wilfully, and openly assume the position of assisting a certain section of the public to defeat the local medical men in a matter involving the vital interests of the profession, qualified medical men were, we regret to say, found willing to take these posts.

4. One of our members had previously acted as the medical officer of an industrial assurance company offering "medical aid" as an attraction to its insurers, paying its medical officer a fixed salary, and canvassing for patients from door to door. This office he has resigned, but in the absence of any declaration as to these appointments by the General Medical Council, or by the universities and colleges granting medical qualifications, the company has, we believe, easily found a substitute.

5. Such facts as we have recited can be quite paralleled in the experience of other towns and districts of the United Kingdom, and appear to us to call for the careful attention of the various governing bodies entrusted with the granting of medical qualifications and with the control of those qualified.

The dignity and independence which are essential to the adequate discharge by medical men of their duties to the public are gravely imperilled by these abuses. In particular (*a*) canvassing by lay bodies on behalf of medical men employed by them is plainly contrary to the first principles underlying proper professional relations, and appointments depending on such canvassing ought not to be permitted to be held by registered medical practitioners; (*b*) it is impossible for a medical man, acting under the control and direction, and entirely subservient to the pecuniary interests of a purely trading company which traffics in medical attendance, to satisfactorily perform the duties of a medical practitioner; whilst (*c*) the unchecked extension of the club system to all classes of society threatens a general conversion of medical practice from the basis of private relation to that of public contract, a conversion which we think the medical profession should resist with all its strength not more in its own interest than in that of the public.

We therefore beg leave to submit the following questions to the consideration of your { Senate / Council }:—

(*a*) Is the holding of appointments such as are herein described compatible with the conditions under which your { degree / diploma } is granted and held?

(*b*) If the holding of such appointments by your { graduates / diplomates } does not contravene the existing regulations, does not your { Senate / Council } consider that, in the interests of the medical profession and of the public, by-laws forbidding such practice should be adopted?

(*c*) Is not your { Senate / Council } of opinion that for a medical man to hold such appointments should be declared by the General Medical Council to be conduct infamous in a professional respect, and if so, will your { Senate / Council } instruct its representative on the General Medical Council to support such a declaration?

(Signed)

HENRY BLAKE, M.B. Lond.
THOMAS LETTIS, M.R.C.S. Eng., L.S.A.
A. C. MAYO, M.R.C.S. Eng. and L.S.A.
A. H. MEADOWS, M.R.C.S. Eng., L.R.C.P. Lond.
THOS. HY. MOXON, M.R.C.S. Eng., L.S.A.
ALBAN H. MOXON, M.R.C.S. Eng., L.S.A.
CHARLES O'FARRELL, L.R.C.P., L.R.C.S. Edin.
JAMES RYLEY, M.D. Lond., M.R.C.S. Eng.
RAYMOND H. SHAW, M.S., M.B. Durh.
JOHN BENJ. NICHOLSON VICKERS, L.R.C.P. Lond., M.R.C.S. Eng.
J. SMITH WHITAKER, M.R.C.S. Eng., L.R.C.P. Lond.
R. WRIGLEY, M.R.C.S. Eng., L.S.A.
W. E. WYLLYS, L.R.C.P., L.R.C.S. Edin.
WM. WYLLYS, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.
LEONARD YOUATT, M.B., Ch.B., D.P.H. Vict.

COVENTRY PROVIDENT DISPENSARY AND ITS MEDICAL STAFF.

The medical staff of this old—perhaps the oldest—provident dispensary have addressed a memorial to the committee asking for several alterations in the rules. One was for the fixing of a wage limit; another was to have a rule cancelled which requires the appointment of a new medical officer when the aggregate salaries of the staff equal an average of £350 each; another to allow all the members of the staff to sit on the committee instead of only two; and a fourth to raise the subscription for children where a concession for large families is now allowed. These are all most reasonable propositions; certainly the first and the last two. Yet the committee have declined to agree to them, except to a slight rise in children's subscriptions. The memorial has been twice presented, and the requests have been twice refused. The staff owe it to themselves and the profession to be firm in demanding compliance with such just claims. In doing so they should have the support of the profession of the town and neighbourhood. Without this they could scarcely be expected to be firm. According to the *Birmingham Mail* the committee are not in a conciliatory frame of mind, and are prepared to engage a medical staff exclusively for the dispensary, as is being done at Yarmouth and other towns. Such high-handed disregard of the just claims of the profession would not be possible if the profession were true to itself. Of this the staff must judge for themselves. They are not called on to play into the hands of those who are ever ready to accept offices vacated by others and to reap what they have not sown.

FOREIGN UNIVERSITY INTELLIGENCE.—*Lemberg:* Dr. H. Schramm has been recognised as *privat-docent* of Surgery.—*Prague (Bohemian University):* Dr. V. Slavik has been recognised as *privat-docent* of Forensic Medicine.—*Utrecht:* Dr. Zwaardenmarker has been appointed to the chair of Physiology in succession to Professor William Engelmann, who goes to Berlin.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 18, 1897.

THE duty imposed on the profession by the resignation of Dr. RENTOUL is one of the gravest kind. The functions of the General Medical Council are far-reaching and likely to become more so. It has the power to very largely determine the course and character of medical education and even to affect the nature of the preliminary education of the country. It has the power, with an almost absolute discretion, of defining infamous behaviour in a professional respect, and of removing any registered practitioner who has been guilty of it from the Medical Register. It is asked from time to time to favour the Privy Council or the Government with its opinions on questions of legislation affecting the profession or the health of the public. These are the great functions of the General Medical Council, and Parliament in its wisdom has determined that the registered practitioners of the country shall elect a sixth part of the General Medical Council. Some highly conservative members of the profession think that this recognition of the claims of the registered practitioners to a voice in the General Medical Council is all a mistake—a sort of interference with the divine right of the universities and the medical corporations to rule the profession and to be the sole exponents of what is needed for the education and discipline of medical men. Others think that Parliament was right in making provision, in 1886, for having the judgment of the practitioners of the country as such on the work of the General Medical Council, and that the principle of direct representation needs a little more extension. They are of opinion that the duties of the General Medical Council would be discharged a little more expeditiously and effectively by a larger importation of men familiar with the details of medical practice and the defects of medical education. This last opinion is held by a large number of practitioners, probably the majority of those on the Medical Register. But it must be admitted that the evidence is not decisive on this point. The doubt arises from the fact that the profession has never put forth its strength, or even three-fourths of its strength, on the occasion of the election of direct representatives, and that at the last election there was a great defection of voters and a great discord of opinion among those who did vote. Out of 22,577 voting papers sent out only 11,990 were returned validly signed and filled up. It will be difficult to convince statesmen that the profession cares about direct representation if nearly half the voters on the Medical Register abstain from voting.

There is a duty on the profession as urgent as voting, and prior in point of time to voting—that is, the duty of selecting candidates. The misfortune of the past elections, and especially of the last one, was that the interest of the profession was so divided over a number of candidates that no individual candidate could boast that he had been returned by even a third of the profession. There were ten candidates for three vacancies. The first on the poll had 6646 votes; the last had 143. The profession cannot expect its direct representatives to do much on such terms as these. Neither the General Medical Council nor the public can take direct representation seriously if the profession is to drift in the matter of selection and at the end to be hopelessly divided among ten candidates. The first and most urgent duty then of the profession is the selection of a candidate. Is it beyond hope that the profession and its associations should for this purpose of selection of a fit and proper candidate to represent over 22,000 registered medical men comport itself as if it were one man. That is the only way to make direct representation respected. There is no lack of men either in the Provinces or in London whose experience and character and standing in the profession would add to the weight and efficiency of the Council. If one such were selected by a representative group of men in the profession he would come forward with such advantages and recommendation that his election would be certain, and his influence thereafter in the Council would be considerable.

The occasion is really a serious one. We have said nothing about the untimely vacancy, which for the future will put the profession and the Council to the expense of a double election. The gentleman to be elected will be elected for five years, and his term of office will expire a year after that of his two English colleagues; and such an anomalous and inconvenient state of matters will last till an absurd defect in the law is remedied. Dr. RENTOUL has, no doubt, reasons which are satisfactory to his mind for the perplexing step he has taken before he has been a year in the Council and just when he would have had his opportunity of expounding to the Council the views which he has pressed so incessantly on the profession. We may hope that these reasons will satisfy the electors who returned him in December last. We have no wish to spend our time or space in devising excuses or explanation of an act which none can explain but Dr. RENTOUL himself. Be this as it may, the vacancy is a fact, and has to be promptly filled up; and what we impress on our readers is that the whole circumstances of direct representation are such now as to make this election one of peculiar importance. The members of the profession who care least for direct representation cannot wish to see it brought into discredit by want of interest or want of method in those who constitute the great bulk of the profession. Neither the dignity of the profession nor the interest of candidates can be served by a general apathy—by nobody doing what is supposed to be everybody's business. The institutions of the profession recognised by law are of no use for this purpose. They are over-represented already. The only organisations that can intervene here are its voluntary associations. The strength of them will be judged by their action at this moment. If all that has been said lately in high quarters about the powerlessness of one great organisation is not to receive a striking confirmation that body will have to show more power of initiative, and courage of selection and of preference than it showed last year. We have only two words to say in conclusion. One is that the vacancy arises by the resignation of a member living in the provinces, and

that it is natural that the provinces should think themselves entitled to the seat if they can agree upon one suitable candidate. The other is that no time is to be lost. We give in another column the legal steps of the procedure of election for the guidance of candidates and their friends, from which it will be seen that in less than a month the election will be over.

WHY should medical practitioners be appealed to only in cases of pronounced disease? Why should they not be asked for a professional opinion even by those who to outward appearance are in good health? Just as the wise administrator or manager overhauls his books from time to time to make sure that no item has crept in or been omitted which may eventually disturb the balance, so the "intelligent custodian of his own health" will have his condition professionally examined at intervals more or less frequent so as to satisfy himself that the complex machine he calls his "system" is in good working order. This is one of many practical corollaries to be gathered from Dr. ANGELO MOSSO'S latest book—the work of a biologist, a physician, an athlete, and, we may add, a poet—which, dealing with one great and increasing province of human activity, appears opportunely to allay misapprehensions and to give sound advice or even warning for the benefit of all whom that province attracts. "La fisiologia dell' Uomo sulle Alpi" (the Physiology of Man on the Alps) is its title, and it should be read after a judicious perusal of the writer's attractive treatises on "Fear," "Fatigue," and "Brain Temperatures," supplementing these, as it does, in many important directions and concentrating the *ensemble* of their findings and conclusions on corporeal exertion in general and mountaineering in particular. Himself a "peak-stormer" with a distinguished record, Professor MOSSO approaches the subject with an authority which only the life-long worker in physiology and experimental hygiene can command, and he uses his knowledge so genially, and illustrates it from such a fund of experience as to inspire sympathy and gain a hearing in quarters impervious to mere didactic exposition, however well accredited. For the observations on which the present book is based he had at his service ten soldiers of the Alpine regiment under the command of an army surgeon; he had also a working laboratory fitted up in a cabin 4500 mètres above sea level; he could subdivide the ascent (of the Monte Rosa) into diverse stages with encampments and other shelters, so as to overtake these said stages at different rates of rapidity, with the soldiers divided into two companies; he had, in short, an array of "means to ends" never before enjoyed by investigators in the same province; and if special circumstances obliged him to limit his sojourn on the peak of Monte Rosa to ten days, he could with advantage recall the words of his able precursor, Signor G. ZUMSTEIN, who, reporting to the Turinese "Accademia delle Scienze" the results of his first ascent of the same mountain, observed: "Il faut s'estimer heureux si l'on peut faire la moitié des observations aux quelles on s'est préparé." From a book which has few pages not pregnant with acute remark or practical comment it is difficult to make representative excerpts, those selected seeming a moment afterwards to be surpassed by others in freshness and value. But omitting Professor MOSSO'S corrections of previous investigators from SAUSSURE downwards as to "respiration on the mountains," as to the phenomena of the circulation, as to the "Mal di Montagna," and such like, we may cal attention to the paragraphs on "Automatism" and its effects on the mountaineer, always marked, and not seldom disastrous. "Let the Alpine climber never forget," he says, "that he may become an automaton through fatigue when it is no longer the brain that gives him the impulse to walk, but a blind, unconscious force." In these circumstances he becomes dead to danger, because all his sense-perceptions and his mental alertness are blunted. What seems daring in this condition is simply the indifference of insensibility. It is not "the offspring of courage; it is the expression of a pathological fact due to the nervous exhaustion which annuls the consciousness of peril." Temporary impairment of memory is, he points out, a constant effect of fatigue incurred in mountain ascents; it is part of the general diminution of sensibility caused under the same conditions. The muscular sense similarly undergoes a change for the worse. "Look," he says, "at the gait of those who are approaching the end of a long march; their semi-collapsed attitude, their listlessness, depend in great part on this—they feel the ground less well beneath them." This is a dangerous condition to fall into in an Alpine ascent, an error in footing not being corrected with that promptitude on which safety so often depends. The acuteness of the eyesight frequently diminishes—even the sensation of light. This phenomenon Professor MOSSO illustrates from his own experience, and then he proceeds to consider the effects of exhaustion on so-called "nervous persons"—a difficult subject, because, as he says, we do not know how much real energy they have at command, while they often start on an ascent without estimating "quid valeant humeri, quid ferre recusent." Again, they have no idea of what outlay of force the exertion may cost them. "It is not to be wondered at," he remarks, "that grave incidents overtake them even on short expeditions." They fall into what he terms "un errore fatale di contabilita fisiologica." As a first effect, fatigue produces an excitement which engenders the mistaken belief that they are really stronger. This he illustrates by a series of effective examples drawn from experience. "The excitement produced in the system," he continues, "by the 'scorie della fatica' (the débris of metabolism) prevents their realising how much potential force they still retain. ..... Those individuals who most nearly approach systematic bankruptcy are unfortunately the very individuals who most enjoy the nervous excitation produced by fatigue. They court it with the craving of the morphinomaniac, who avails himself of morphine not to sleep, but to excite himself. Everyone referring to his acquaintanceships must recall some slightly-built, especially nervous and hysterical subjects, who boast they have never known what fatigue was. ..... Physician and patient alike are often drawn into error by this physiological paradox; the patient is recommended to court movement as a means of working off exuberant force, while the ratio of physical exercise is already excessive and ought instead to enjoin repose. FÉRÉ has just shown that nervous fatigue and profound emotion render us more

vulnerable to poisons. The fatigue of the muscles is indeed a poison. Strange and much to be dreaded is this condition of the weakly. Their body resembles a 'going concern' or a commercial house in which the cashier (the nervous system, in that case) does not let the principal know either what sums he has in the till or what outlays the house is continually incurring. Matters go on without the possibility of ever striking a balance. Light-heartedness and waste increase fatally the nearer the approach to bankruptcy.' How true this is in everyday life, how disastrously true in the world of bicyclists, amateur athletes, and, above all, Alpine climbers, is known to none better than to the medical practitioner.

AT the third general meeting of the Twelfth International Medical Congress recently held at Moscow Professor LEYDEN, of Berlin, read a paper on a subject which has many times been brought before the notice of medical men, not only during the last few years, but upwards of 200 years ago—namely, the contemporary methods of treating tuberculous patients, and the need of Government control over them. The terms "200 years ago" and "contemporary" may seem contradictions, but at the former period in Italy medical men came to the conclusion that "consumption" was contagious, and most stringent measures were adopted to attempt to control it by notification, isolation, and disinfection, but apparently without effect. Within the last decade renewed efforts have been made in the same direction. CORNET'S[1] experiments have done much to accentuate the need for the proper disposal of the sputa of phthisical patients, and the authorities of the Brompton Hospital for Diseases of the Chest have adopted measures in this direction. It has several times been suggested that pulmonary tuberculosis should be made a notifiable disease—that is to say, in the words of Professor LEYDEN'S paper, that there is "need of Government control over them" (the patients). Although at first sight this would seem to be the correct way to deal with an infectious disease, there are numerous difficulties to be overcome. In the first place such a proposal presumes that the contact of tuberculous patients with healthy individuals is a source of danger to the latter. That this is not so in the same way as in the case of other infectious maladies is evident from everyday experience. Another difficulty is that in the majority of instances the disease has existed for some considerable time before it has been recognised, and the clinical and post-mortem records of our general hospitals would seem to indicate that many patients have suffered from pulmonary tuberculosis without ever having been aware of it, so that a satisfactory notification would be impossible; but on the other hand it behoves every practitioner who is attending a patient suffering from pulmonary tuberculosis to give careful directions as to the disposal of the sputa and the disinfection of linen (especially handkerchiefs) likely to be soiled with the expectoration.

[1] Zeitschrift für Hygiene, 1889, v. vi.

The principal points in treatment were fully referred to by Professor LEYDEN. Like most other physicians who have had a large experience in treating the disease now under consideration, he is reluctantly compelled to admit that up to the present time we have discovered no means of actually attacking the bacillus itself when it has succeeded in invading the lung, and we have therefore to strengthen and reinforce the powers of the individual so as to enable him to withstand the influence of the microbe. He pointed out that the principal points in this mode of treatment are:—(1) Choice of a suitable climate; (2) a good air, free from dust; (3) good nourishment; (4) exercise; (5) methodical treatment of the patient in special institutions; and (6) medicinal treatment as auxiliary to the general treatment. Cold fresh air was of the greatest importance; and a suitable amount of exercise should also be permitted. All the various points, Professor LEYDEN maintained, in a successful scheme of treatment were only attainable in a properly conducted sanatorium. With this statement we can only partially agree. It is, no doubt, to a great extent true, but not as regards all classes of patients, and for this reason, patients must be divided in accordance with their financial means. Patients who cannot afford climatic treatment—that is to say, those who cannot afford to live in a climate suitable to the condition of their lungs—would of course do better to avail themselves of such institutions, but others, we believe, would do wisely to provide themselves with a suitable home, temporary or permanent, under medical direction, apart from the constant society of patients afflicted similarly to themselves. Our large chest hospitals are to a great extent such institutions as Professor LEYDEN suggests, with the exception of climate, which could certainly be improved upon; and the Brompton Hospital is at the present time making an endeavour to establish a branch in the country, where more salubrious climatic conditions prevail. But at the same time the statistics of our chest hospitals are satisfactory as showing what the other conditions—good food, cleanliness, and rest—can do.

Climate is of course one of the most important points in connexion with tuberculous disease; but it is not everything, and it is possible to be too hasty in advising patients to "go abroad." Other things must be considered apart from the stage of the disease and other medical points; the domestic and monetary circumstances may actually render it impossible for the patient to leave England. It is in such cases that the formation of such institutions as Professor LEYDEN suggests would prove of the greatest service. Our south coast offers a fairly favourable climate for cases of pulmonary tuberculosis. What is known as the "open air treatment" has proved very successful, and this has already been adopted at Bournemouth, if not at other places. The Royal National Hospital at Ventnor is an excellent institution, but the number of beds is limited and the authorities quite rightly are most strict in the selection of cases, and there are consequently large numbers of patients in the more advanced stages of the disease seeking admission to whom increased accommodation would be the greatest boon, as they are otherwise entirely unable to take advantage of the climate which our south coast offers.

Annotations.

"Ne quid nimis."

THE CHURCH AND SANITATION.

WE have received a reprint of the annual sermon of the Church Sanitary Association, delivered in All Saint's Church, Tufnell Park, by the vicar, the Rev. W. J. Hocking, on Aug. 1st. It is an eminently practical discourse and full of plain speaking, as witness the following: "Science is making it clearer and clearer every day that not only diseases, but a very large proportion of the deaths of the country are attributable to causes which have been evolved out of things for which men are directly or indirectly responsible. It is, therefore, not only foolish piffle, but insulting ignorance, to say that the good God wills these things, and that we must resign ourselves to them." There is a mediæval simplicity and homeliness about these remarks which go far to excuse the lapse into slang terms. We are in full accord with Mr. Hocking when he contends that dirt and disease are not part of the divine order of things, and also that it is the duty of the Church to care for the bodies of men as well as their souls. Formerly she always did; the first hospital in London was a monastic establishment; it was the Church that drained fens, brought waste lands into cultivation, and taught people the advantages of living a healthy, regular life by rule. Even as late as the seventeenth century it was the Orthodox church of the East which provided for the care and isolation of lepers, and every parish priest going in and out among his flock ought to impress upon its members the paramount necessity of cleanliness, and, as Mr. Hocking says, not be afraid to tell landlords when their property is in an insanitary condition. The simple laws of health and sanitation ought to form a part of the examination of every candidate for ordination. Doubtless many will say it is not the business of the clergy to concern themselves with such matters, but we contend that it is, for amid unhealthy and filthy surroundings a healthy and moral mind is all but impossible.

ANTI-TUBERCLE SERUM.

AT a meeting of the American Medical Association held at Philadelphia last June Dr. Paul Paquin, of St. Louis, Mobile, gave an account of a considerable number of cases which had been treated with anti-tubercle serum, the results being in his opinion extremely favourable. The substance of Dr. Paquin's paper has been published in the *Journal of the American Medical Association* of July 17th last. It seems that a tubercle antitoxin has been prepared in St. Louis under his direction ever since the year 1894, and in January, 1895, he presented to the St. Louis Medical Society a report of the results obtained in 22 St. Louis City Hospital patients who had been treated exclusively with serum for three months. Most of these patients were eventually lost sight of, but it is known that three of them are still alive, following their occupation and apparently well in health. A second report of entirely new cases was made to the St. Louis Medical Society in March, 1896, and included the recovery of 16 cases of pulmonary tuberculosis, 2 of which were acute and 14 chronic. In this report Dr. Paquin stated that "of 100 cases treated in a period of eighteen months the following results obtained: In the first and second stage, as understood in general practice, 14 recovered; in the second stage, improved or checked or still improving at the time, 26; among these 26, 12 seemed to have really recovered, although the time had not been long enough to warrant positive assurance; there had disappeared from observation in all stages, 35; died during treatment, begun at the third and fourth stages, including 10 moribunds who insisted on trying the treatment, 25." In September, 1896, he presented a report to the Virginia State Medical Society of a total of 226 cases of tuberculosis exhibiting the following symptoms: Destructive broncho-pneumonia with cavities, 37; destructive broncho-pneumonia without recognisable cavities, 66; diffuse febrile pneumonia, with or without a destructive process, 19; diffuse non-febrile broncho-pneumonia, with or without destructive cavities, 19; circumscribed febrile broncho-pneumonia, 35; circumscribed apyretic broncho-pneumonia, 13; not described with sufficient accuracy for classification, 32; and extra-pulmonary tuberculosis, 5. The results of serum treatment were as follows: Recoveries that seemed complete and permanent, 40; apparent recoveries, with cavities *in statu quo*, 3; improved, capable of performing usual duties, 41; improved to a lesser degree, 69; number of deaths reported, 32; and disappeared from observation or under various treatments, 41. It was further stated that the patients' weight was increased in 125 cases, unchanged in 15, decreased in 27, not recorded in 59. At the meeting last June Dr. Paquin presented a report of 67 cases treated last year and not included in the foregoing statistics. The results of treatment were as follows: Recoveries that seem complete at present, 17; improvements to a considerable degree, 35; improvements to a lesser degree, 11; deaths, 4. This report does not include the numerous cases in which serum was tried for moribund patients, or in more favourable cases for too short a time, neither does it include a number of cases improved in the last few months by using serum by rectal injection.

THE VESTRY AND THE REPORT OF THE MEDICAL OFFICER.

THE following resolution was recently passed by the Vestry of St. George the Martyr, Southwark, with reference to Dr. Waldo's report:—

"That in the opinion of this Committee [Public Health and Sewers] the appendix to the medical officer of health's report contains a large quantity of unnecessary matter, and that the vestry clerk communicate with the Local Government Board, directing that reports, papers, and regulations which have not previously been submitted to the authority or issued for the first time during the year be excluded from future reports."

The Local Government Board was accordingly communicated with, and their reply was read at the meeting of the vest y held on Sept. 8th. It ran as follows:—

"Local Government Board, Whitehall, S.W.
"4th August, 1897.

"SIR,—I am directed by the Local Government Board to advert to your letter of the 13th ultimo enclosing a copy of a resolution passed by the Vestry of the Parish of St. George the Martyr, Southwark, expressing their opinion that the appendix to the Annual Report for 1896 of the Medical Officer of Health for the Parish contains a large quantity of unnecessary matter. I am to state that it rests with the Vestry to decide what documents shall be reprinted as an appendix to the annual report of the medical officer of health, but I am to observe that in the present case there are matters contained in the appendix which, in the opinion of the Board, are of more importance in connexion with the report, and some of which might properly have been included in the report itself.

"I am, Sir, your obedient servant,
(Signed) "H. C. MOWAN, Assistant Secretary.
"J. A. Johnson, Esq., Clerk to the Vestry of the
"Parish of St. George the Martyr, Southwark."

It will be seen that "honours were easy" in this important dispute as far as the result of the appeal to the Local Government Board goes. On the one hand, the vestry is told that it rests with them to decide what documents shall be reprinted as an appendix to the annual report of the medical officer of health, which, we presume, is not exactly Dr. Waldo's contention; but, on the other hand, the Board points out that the vestry have not the necessary knowledge to exercise the discretion which they appear to possess, as the matter which it was desired to exclude appears to the Board to be of particular importance to the report. Our own opinion on this matter has been already very definitely stated. The

action of the vestry of St. George, Southwark, has been misguided and, though possibly honest in intention and devoid of private ill-feeling, has given the public a right to withhold confidence from them.

"STONES IN THE HEAD."

THERE are some curious pictures in the Dutch museums which would suggest that at one time the removal of "stones in the head" was a common operation. Thus in the picture of Pierre Brueghel le Vieux in the engraving room of the Amsterdam Museum, and of Van Bosch in the same collection, and also in the picture by Jan Steen, in Boijmans Museum, Rotterdam, all of which are of the sixteenth century, there are unmistakable indications of a patient undergoing an operation for the removal, not of one stone, but of quite a pile of stones. In an interesting paper by Dr. A. Cartaz in *La Nature*,[1] he applies himself to the question as to what was the operation which the painter intended to ridicule. It is probable that the pictures related to operations which were for the most part purely factitious and addressed to subjects of disordered minds. In other words, it was an opportunity which quacks even at that time did not fail to seize. In the picture by Brueghel le Vieux may be seen, hidden under a stool, a confederate with a basket full of stones, ready to be passed at the proper moment, as the ball is passed to the juggler. In Jan Steen's picture the operation is evidently being conducted at home, but here the operator is not without skilful accomplices—the matron, his habitual assistant, with her cunning expression, and the urchin who laughs at the humbug of the thing, as he passes the pebbles which the crafty charlatan causes to roll over the neck of the suffering patient.

SANITARY REFORM IN ALGERIA.

ACCORDING to the French journal *Le Radical* medical and sanitary reform has at length begun to make some progress amongst the native population of Algeria. A few years ago attention was directed to the subject by Dr. G. Martin, a French medical man, who published letters wherein he bewailed the supposed fact that English females had long pervaded the whole of Kabylia under the guise of tourists, whereas in reality they were zealous propagandists who could not be said to inculcate love of France during their ministration. It behoved the French Government to exercise a strict surveillance over these so-called missionaries, but at the same time some encouragement ought to be afforded to national enterprise so that the duty now usurped by foreigners might be carried out under the control of self-sacrificing patriots. This wearer of tinted spectacles then went on to announce the welcome news that at last a step in the right direction had been taken, Madame Chellier, a distinguished graduate of the Paris Faculty, having organised an expedition under the auspices of the governor of the province, M. Cambon. At that very moment this lady was actively engaged in disseminating the truths of medicine and hygiene amidst the benighted female inhabitants of the mountainous district of Aurès, and a commencement having been made with so much energy and success it was confidently to be expected that the movement would speedily attain to the dimensions it so richly merited. Madame Chellier has now sent in two reports, for 1895 and 1896 respectively, but although she has accomplished much *Le Radical* is still discontented. "How far, alas! we still are from what the English are doing in India," exclaims the writer in a burst of candour, "the Governor of Algeria ought not only to persevere in the course he has adopted, but also to do more—very much more!" It was in the beginning of 1895 that Madame Chellier, quitting Batna, first penetrated the Aurès highlands, travelling on horseback by well-nigh impracticable paths, sleeping for the most part in a little tent, and affording medical aid to nearly seven hundred patients in the villages and hovels of this rude region during a period of five weeks. "When we read the account of the barbarous practices resorted to by the matrons attending on the women who are about to become mothers"—continues *Le Radical*—"we cannot but be seized with sadness and pity at the thought that innumerable victims must inevitably succumb owing to the ignorance of these creatures, and that in a country which has been French for half a century." In 1896 it was not five weeks but five months which the courageous Madame Chellier passed in the Aurès, and also in part of Kabylia. In the course of this journey she vaccinated 1400 Arabs of both sexes in places that were periodically decimated by small-pox. She likewise treated 1200 sick people, and all the time she lost no opportunity of teaching the matrons how to perform their duty properly. The work accomplished by Madame Chellier has been unquestionably most valuable, but no one is better aware than she is of its insufficiency. In her opinion the Algerians are ripe for sanitary reform, and all that is required is direction and instruction. The first thing to be done is to establish accouchement schools for female pupils, of whom it will be easy to obtain a sufficient supply. "If the Governor-General of Algeria will only take to heart the work done by the English in India he will render the greatest possible service to France," but in order to arrive at this result access to the native interiors is essential, and female practitioners alone can make their way to where the women live.

[1] A translation of this paper appears in the August number of Appleton's Popular Science Monthly.

A NEW FIRE EXTINGUISHER.

ACCORDING to a statement published in the July number of the New York *Insurance Times* the hose and hydrant have found a formidable rival in their work of fire extinction. The new comer is a powder which is said to be so light as to be easily carried by a draught of air in any direction. It does not injure furniture or other objects with which it may come in contact, it cannot freeze, nor does it lose in efficiency by age or climate. It requires no machinery for its application. Its powers were recently demonstrated by a test experiment carried out under the direction of the New York Fire Department. A wooden building furnished with a flue thirty-eight feet long was set on fire, and when well alight was treated with the new extinguisher. Two tubes were used, and in seventeen seconds the fire was subdued, the entire inner surface of the flue having been charred in the meantime. We are not informed as to the composition of this powder. If it be as safe as it appears to be efficacious, it should prove a useful addition to the safeguards against fire already employed in the household. Its lightness ought certainly to enhance its value in dealing with that occasionally dangerous bugbear—fire in the chimney.

"DEATH BY LIGHTNING."

WITH reference to an annotation bearing the above heading in THE LANCET of Sept. 4th we have received a letter from a medical correspondent pointing out that there were certain inaccuracies in our account of the details of the sad case, and kindly supplying us with the following interesting particulars which, we think, should not go unrecorded. Our correspondent saw the deceased about four hours after death, by which time the body had been undressed and washed. The hair was singed in front of and above the right ear, and there was a little blood in the meatus. The skin of the front of the neck was dark-red and stiffened, so that it did not pinch up so easily or in so thin a fold as the healthy skin. This change extended to about

the posterior edge of the sterno-mastoids, and faded gradually. Down the chest and abdomen were two well-defined, sharp-edged, irregular, ribbon-shaped bands in which the skin was dark-red, uniformly depressed, and hard. Quite at the lower part of the abdomen these ceased, and here again there was singeing of the hair. The thighs were quite untouched, except for a few (six or eight) small oval spots of this reddened, depressed skin scattered over the upper part of the right thigh (front). On the front of the left leg, from knee to ankle, were several irregular streaks of the same nature as the bands on the chest, some of them from two to three inches long and about a quarter of an inch broad, and there was a similar condition on the back of the right leg, from knee to ankle. On the under surface of the right heel was a transverse laceration an inch long with healthy edges. Nothing corresponding existed on the left side. No bones were broken, no skin was torn off, nor was the right leg torn or blackened.

HABITUAL DISLOCATION OF THE SHOULDER.

HABITUAL dislocation of the shoulder, though rare, has occurred often enough to have attracted some attention. An important article on the subject by Dr. H. L. Burrell and Dr. R. W. Lovett appeared in the *American Journal of Medical Sciences* for August, 1897. The name "habitual dislocation" refers only to those cases where dislocation occurs from causes too slight to displace the normal joint. Pathological conditions which are very variable have been found—depressions on the head of the humerus, or loose bodies in the joint; rents in, or laxity of the capsule; and rupture of muscles or tendons. Fractures or chronic non-suppurative inflammation are probable causes of some of the changes in the joint. Immobilisation of a joint for too short a period after a dislocation may prevent union of a rent in the capsule. A curious and unexplained fact is that a large proportion of the patients were epileptics. The writers have observed certain signs not heretofore recorded in patients subject to dislocation. There were drooping of the shoulder and notable atrophy of certain muscles—the coraco-brachialis, the triceps, the deltoid (especially the posterior part), the supraspinatus, the infraspinatus, the rhomboids, the levator anguli scapulæ, and the latissimus dorsi. The other muscles were not notably diminished. Examination by the fluorescope showed that the cathode rays penetrated the affected shoulder with more difficulty than the other, and that the head of the humerus was farther from the acromion, but it could be replaced by raising the elbow. Limitation of movement was present in all cases to a slight extent. In the absence of treatment the prognosis is bad, as the dislocations tend to become more frequent. The treatment consists of fixation combined with massage and exercise. If this fails after ten weeks' trial an operation is advisable. The arm is fixed by supporting it with a sling and holding it to the side with a swathe. After some weeks motion should be progressively allowed, together with massage and exercises for the muscles ordinarily affected. The treatment should be continued for at least three months. Faradaisation of the atrophied muscles is also a help. The writers recommend the following operation which has been perfectly successful in the two cases in which they performed it. An incision was made downwards and outwards from the coracoid process, following the line of the cephalic vein, to below the upper border of the insertion of the pectoralis major. The cephalic vein was drawn outwards, and the pectoralis major separated from the deltoid. The upper three-fourths of the insertion of the pectoralis major was divided, and the head and neck of the humerus came into view. A portion of the insertion of the subscapularis was divided. The arm was raised to a horizontal plane and the head pressed backwards to relax the capsule. The latter, which was apparently lengthened, was grasped with vulsellum forceps. Three sutures were inserted; a fold three-quarters of an inch in length and three-eighths of an inch in width was excised; the sutures were tied, and the wound was closed. No attempt was made to unite the partially divided tendons. Excision of the head of the humerus had been performed several times with good results; but it was only to be recommended when the joint presented such abnormalities as to demand it.

THE PECULIAR PEOPLE.

IT is a primary and self-evident proposition that the duty of the parents of a child who is ill is to procure medical advice for their offspring. The law looks on the neglect of this duty as tantamount to manslaughter. Unfortunately, in the case of the "Peculiar People" this line of conduct is negatived by the literal acceptance of a single text of the Bible, which is clearly meant to be read in connexion with the whole of Scripture, which abundantly recognises that they who are sick need a physician. Law is a legitimate means of correcting such absurd errors. The latest instance is that of a man, who allowed his child when suffering from lobular pneumonia to go from bad to worse, and finally to die. Mr. R. J. Carey, of Barking-road, made the post-mortem examination, and expressed the opinion that the child might have been saved by proper medical attention. The jury returned a verdict of "Manslaughter," and the father was committed to take his trial.

THE SANITARY CONDITION OF HIGH WYCOMBE AND WYCOMBE MARSH.

THE search-light of a Local Government Board inquiry was a few years since thrown upon the sanitary condition of High Wycombe, and, more recently, the village of Wycombe Marsh has been subjected to a similar investigation. As a result of all this, the conditions obtaining at both these places has become matter for public comment, and a portion of the lay press has recently uttered some strictures on the methods, or perhaps want of methods, of those who have been entrusted with the sanitary administration of High Wycombe. The two places referred to are situated in a Buckinghamshire valley draining into the Thames, High Wycombe being rather further removed from the Thames than is Wycombe Marsh. The sewage of the borough is conveyed by means of a main sewer, which is far from water-tight, to a sewage farm which is situated but a short distance from Wycombe Marsh. It was the intention in the first instance to chemically treat the sewage, but the volume of subsoil water finding its way into the sewers is so great that the sewage farm is altogether incapable of dealing with the diluted sewage arriving thereupon. As a consequence, the insufficiently treated sewage passes on to join the subsoil water beyond the sewage farm. This is, however, but half the story. It appears that neither the people of High Wycombe nor of Wycombe Marsh are provided with a proper water-supply, and this fact is particularly unfortunate for the people of the latter place, who draw their water from shallow wells sunk in the porous gravel of the district, into which much of the effluent from the High Wycombe farm escapes. Hence it happens that when enteric fever prevails in the borough, there is risk of the Wycombe Marsh wells becoming polluted; indeed, Dr. Buchanan, who recently investigated an outbreak of enteric fever at Wycombe Marsh, concludes that the evidence obtainable points to the contamination of the subsoil water as the cause of the outbreak. It is to be regretted that the extent of the prevalence of enteric fever in High Wycombe cannot be definitely arrived at, inasmuch as

the Wycombe councillors have but recently taken advantage of the facilities offered by the Infectious Diseases Notification Act; but certainly suspicion attaches itself to all authorities who are unwilling to make themselves cognisant of the dangers in their midst, and perhaps enteric fever may be found to be more or less endemic in High Wycombe. The town council is said to be at last bestirring itself in the matter of stopping the leaks in the sewers; but the amount voted for the purpose is not regarded by all as adequate, and it has yet to be proved that the sewage can be so treated as to afford any guarantee that pathogenic organisms arriving on the farm may not retain their virulence until they reach the subsoil water of Wycombe Marsh. The town councillors are naturally angry at their affairs being discussed in public, but it is their obvious duty at once to set their house in order; and it appears from the reports which we have read that a pure water-supply for the whole of High Wycombe and for Wycombe Marsh is not the least pressing question for the urban and rural district councillors to grapple with.

UNIVERSAL HYPERTRICHOSIS AND PREMATURE MENSTRUATION IN A CHILD.

THE following case, published by Lesser, appears in the July number of the *Revue des Sciences Médicales*. A girl, aged six years, who was not abnormal at birth, showed for the past two years a remarkable development of hair. The body, especially in the lower limbs, was covered with hairs more abundantly than in a very hairy man. The pubic hairs were more developed than in many adult females. There were whiskers on the face. The hair of the head was normal. Menstruation began at the age of three; it lasted six or seven days, and was profuse. In the following eighteen months it reappeared eight or nine times at almost regular intervals, and then ceased. The intelligence was advanced in a corresponding degree. The child's parents and elder brothers and sisters had normal development of hair, but two brothers, aged sixteen and twelve years, and next in age, had precocious beards. We may direct attention to one point. The case shows something more than precocious sexual development in the case of the hair. There is also production of male characteristics. Now, curiously, in the adult female this event is also associated with abnormal conditions of the genital organs.

THE SPAS OF SPAIN.

SPAIN possesses many mineral springs, but very few of them are at all well known in other countries. Amongst the few exceptions may be reckoned some aperient waters, the sulphurous springs of Panticosa in the Pyrenees near the French frontier, and also the alkaline waters of Vidago, termed the "Spanish Vichy." From the official statistics published by the Spanish Government[1] it appears that the total number of establishments is 169, and that they are scattered over forty-three different provinces. The total number of springs is 443, and those of Alhama (Zaragoza), Alhama Nuevo (Granada), and Fitero Nuevo (Navarra) yield the most copious supply of water. Amongst the hottest springs are those of Caldas de Montbuy in Barcelona (122° to 158° F.) and Archena in Murcia (131° F.). The spa of Panticosa in Huesca has the loftiest position, being about 5600 English feet above sea-level and nearly rivalling St. Moritz in altitude. Amongst strong sulphated waters the Spanish sources of Rubinat, Carabana, and Villacabras are tolerably well-known in other parts of Europe, especially in France; the aperient water of La Margarita, Loeches (Province of Madrid) is widely known in Spain, and is sold in bottles everywhere. The annual number of visitors is nearly 2500 at Caldas-de-Oviedo and at Montemayor (Caceres); some other spas, as Archena, attract considerably more. The greater proportion of the springs can be classed in either the common salt, simple thermal, or sulphurous groups.

[1] La Gaceta de Madrid, May 8th, 1897.

THE SPECIAL CANADIAN SUPPLEMENT TO THE LANCET.

SOME copies of the Special Canadian Supplement to THE LANCET produced, printed, and published in Montreal on Sept. 3rd on the occasion of the meeting of the British Medical Association in Canada have reached us by the last mail. Such a publication is, we venture to think, a new departure in medical journalism. The supplement appears as a journal of forty-eight pages and contains the addresses of Dr. Roddick, Dr. Osler, and Mr. Mitchell Banks, a leading article, and editorial notes and comments upon the proceedings of the meeting, together with a (necessarily brief) report of the proceedings in the different sections.

THE CLOSURE OF WELLS LIABLE TO POLLUTION.

THE interpretation which the law usually places upon the provisions of Section 70 of the Public Health Act is far from satisfactory to the medical officers of health, who, in spite of a well being in a most dangerous environment, may be unable to effect its closure unless the water from it can be demonstrated by analysis to be polluted. That liability to pollution is a far more important point than the result of chemical or bacteriological examination is admitted by every epidemiologist, but, as a matter of practice, a given case must, as a rule, stand or fall according to the finding of the chemist at any given time. The decisions of the law have, however, a way of being modified in a remarkable manner, and when a legal position is obviously opposed to what may be called the common sense view the law tends to place an interpretation upon words and sentences in keeping with the spirit of the moment. This point was illustrated in an interesting fashion by a decision arrived at recently at the St. Albans divisional sessions, when the St. Albans rural district council sought closure orders against twenty-three owners of wells in the Bowling-alley, Harpenden. The contention of the council was that the whole of the area in which the wells in question were situated was pervaded by the enteric fever bacillus owing to the fact that the subsoil was permeated with infected excreta; furthermore, it was shown by chemical analysis that the water from the wells presented different degrees of organic pollution, although the wells were all supplied from the same source. It was urged, too, that the variations in the analyses during dry and wet weather showed the wells to be liable to intermittent pollution. For the defence it was argued that no chemical analyses had been produced, and that it must be proved before the Court that a well was actually polluted, and not that it was liable to pollution. The Bench, however, after much deliberation, decided to issue orders for closure, as they considered that the wells might prove dangerous in the event of a fresh outbreak of enteric fever taking place. Whatever may be the merits of this decision from a strictly legal standpoint, no epidemiologist is likely to quarrel with it. A locality where the excrement is placed in one pervious hole, and the drinking water taken from another but a short distance away, cannot be other than a dangerous one, and if the law does not enable wells which are thus situated to be closed the sooner an alteration is effected the better. Dr. Frank Dobbin, the deputy medical officer of health of St. Albans, is to be congratulated upon the manner in which he supplied the evidence in this case, and

although perhaps bacteriology will not altogether support some of the points taken up, there can be no doubt as to the general soundness of the position.

THE SANITARY INSTITUTE.

THE twenty-fourth London course of lectures and demonstrations arranged by the Sanitary Institute for the instruction of sanitary officers and students will commence on Sept. 27th and will conclude on Nov. 27th. The various subjects will be dealt with in a course of eighteen lectures, given by well-known authorities, and will be illustrated by diagrams, drawings, models, and lantern slides. The lectures will include the subjects scheduled for the examinations of the institute. In connexion with the lectures there will be inspections and demonstrations, which will include visits to disinfecting stations, dairy premises, municipal depôts, artisans' dwellings, waterworks, common lodging houses, sanitary works in progress, and refuse and sewage disposal works. Practical demonstrations of meat inspection and diseased meat will also be given. The fee for the course is two guineas; a student who enters his name for one of the examinations of the institute at the time of taking his ticket for the lectures can have one guinea carried forward towards his fee for examination. The museum of sanitary appliances and the library will be open free during September, October, and November to students attending the course. The introductory lecture on the Outcome of Sanitation, will be delivered by Dr. Louis Parkes, medical officer of health of Chelsea, on Monday, Sept. 27th at 8 P.M., and the remainder of the series will be given by other lecturers on subsequent Mondays and Thursdays at the same hour. Application should be made to Mr. E. White Wallis, secretary of the institute, Parkes' Museum, Margaret-street, Regent-street, W.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

THIS school, which is exclusively for legally qualified practitioners, undergraduates not being admitted on any conditions, was last year attended by 513 matriculates. The Post-Graduate Hospital is now one of the largest in New York City, having 183 beds. During the past winter the average number of beds occupied at one time was 150. The accommodation is such that practitioners may witness several important operations each day without leaving the building and may also see a large number of patients in the dispensary. The teaching of the school is entirely clinical or demonstrative. In some departments—diseases of the eye and ear, nose and throat, and diseases of women—arrangements are made by which the class may attend the service at other hospitals, as well as the clinics in the Post-Graduate School itself. The hospital is open during the entire year. The school year is divided into two distinct but continuous terms. The autumn and winter courses begin on Sept. 20th and end on June 1st, during which period the fees are $150 for a term of twelve weeks, and $100 for a term of six weeks. During the summer session, the fee for the general course is $30 a month, or $95 for the whole term, from June 1st to Sept. 20th. The school and hospital are in the same building, situated at the corner of Second Avenue and Twentieth-street, New York. They are not private institutions, but are a chartered medical college and hospital forming a part of the university system of the State. A monthly journal, called *The Post-Graduate*, is published by the directors of the school and hospital.

HER MAJESTY THE QUEEN has decided that a public exhibition of the gifts and addresses presented in commemoration of her sixty years' reign shall be held in the Imperial Institute, probably about the middle of October. Half the proceeds is to go to the Prince of Wales's Hospital Fund.

WE learn, just as we are going to press, that Mr. Victor Horsley has consented to be nominated for the vacant seat as a Direct Representative on the General Medical Council.

DR. A. E. SANSOM, President of the Medical Society of London, has been elected an honorary member of the Therapeutical Society of Moscow.

Pharmacology and Therapeutics.

CELANDINE IN CANCER OF THE FACE.

DR. KRAINSKI, writing in the *Russian Ophthalmic Review*, records four cases of malignant disease of the eyelids and face in which he employed the celandine treatment. In two of the cases the neoplasms completely disappeared. In the other two there was distinct improvement, but the cases could not be followed up and so the ultimate result cannot be stated. The time required for the destruction of the tumour was not more than a fortnight. Several injections were made in the sound tissue bordering upon the neoplasm. They were composed of equal parts of extract of chelidonium, sterilised water, and glycerine, four to eight minims of the mixture being introduced at a time. In addition to these a 50 per cent. solution of the extract in glycerine was applied externally twice a day and a dressing put on. The celandine did not affect the healthy tissues and was well tolerated by the conjunctiva. There was some pain for a few hours, and in two cases pyrexia. There was, too, a good deal of swelling around the tumour, and in one case suppuration at the situation of the punctures. Dr. Krainski has also given celandine internally in cases of cancer of internal organs where operation was impossible. A further paper is promised on this subject.

SALICYLATE OF METHYL IN JOINT TROUBLES OCCURRING IN THE COURSE OF FEVERS.

According to Dr. Roger, professor *agrégé* of Paris, the joint pains which sometimes give a good deal of trouble in the course of scarlet and other eruptive fevers may be very successfully treated by the application of about half a teaspoonful of salicylate of methyl to the affected joint which is then bound round with a compress and a piece of waterproof tissue. This is repeated night and morning, and usually has a rapidly beneficial effect.

WHEN IRON IS USEFUL IN ANÆMIA.

It is well known that iron, though strongly indicated, is often not well borne by anæmic and chlorotic patients. According to some recent observations by Dr. Buzdygan the success of iron in these cases depends upon the amount of acid in the contents of the stomach. He found that when there was hyperacidity the administration of three grains of reduced iron, subcarbonate or iodide of iron, only increased the amount of acid and aggravated the troubles usually present in these cases—pyrosis, feeling of weight in the stomach, nausea, and vomiting. When, on the other hand, the contents of the stomach were alkaline or less acid than usual the administration of iron was always well borne, and, indeed, induced a more abundant secretion of hydrochloric acid. In the former class of case, then, the proper line of treatment is evidently first of all to correct the hyperacidity and then to prescribe the ferruginous preparation decided upon.

NAPHTHALAN.

A series of observations has been made in Professor Finger's out-patient department by Dr. Pezzoli on a new preparation named naphthalan which appears to combine the therapeutical properties of tar with those of naphtha. It is a dark-brown unctuous substance with scarcely any smell and a melting point of about 70° C. When used as an ointment it leaves no stain on the patient's linen after it has been washed. It is very useful in various forms of eczema, sycosis, and common psoriasis, as well as in parasitic affections such as ringworm and scabies. It should be used with a certain

degree of caution, as if rubbed in too energetically it is liable to produce some folliculitis of the same nature as tar-acne. It was tried in 42 cases of eczema and appeared to be of value in all stages, which renders it a very convenient preparation for general or out-patient practice. Excellent results were obtained in all the 15 cases of impetigo contagiosa in which it was prescribed. In scabies three applications were found to be sufficient.

EFFECT OF THYREOIDIN ON THE ASSIMILATION OF FAT.

Dr. Tikanadze, of St. Petersburg, has made a series of careful investigations as to the exact effect of Merck's thyreoidin on the assimilation of fat in healthy subjects, comparing the action of this with that of fresh calves' thyroids. The quantity of thyreoidin given was 0·24 gramme, and that of the fresh gland 2·12 grammes, per diem. He found that the quantity of fat assimilated diminished to the extent of from 1·33 per cent. to 4·43 per cent., the thyreoidin producing a more marked fall than the fresh gland. In all cases the quantity of urine excreted was increased. The body weight fell one or two kilogrammes during the six days which were devoted to the experiment, which he believed to be due to the lessened assimilation of fat and the increased excretion of urine and nitrogenous metamorphosis.

ORTHOFORM, A NEW LOCAL ANALGESIC.

It has been found by Dr. Einhorn and Dr. Heintz, of Munich, that the compound methylic ether of amidoxybenzoic acid is possessed of remarkable anæsthetic, or rather analgesic, properties when locally applied. To this substance the name of "orthoform" has been given. It is a white crystalline powder without taste or smell and it dissolves slowly in water. Unlike cocaine it is non-poisonous, and though its analgesic action is somewhat tardy in showing itself it is very much more persistent than that of the older drug. This prolonged effect is very valuable in the case of painful sores or wounds, more especially in burns and in fissures of the lips or nipples. It may be applied to mucous membranes in powder or as an ointment. Orthoform diminishes the secretions and is antiseptic. Its local action may be taken advantage of for internal administration in painful ulcers of the stomach, whether these are or are not of a malignant nature. The hydrochlorate, which is very soluble, is too acid for use as a hypodermic injection or for applying to the eye, but may be employed for internal administration or for urethral injections. In a case of gleet a 10 per cent. solution was well borne and gave relief from pain for many hours, but it provoked severe reaction in a case of acute gonorrhœa—here, however, the discharge ceased completely in four days. As to the dose, a saturated solution of orthoform in water at ordinary temperatures is suitable for local application, and seven and a half grains of the hydrochlorate, or even more, may be given internally several times a day without any inconvenience. It appears therefore that this substance and its salt may be considered entirely non-poisonous. Indeed, in a case of carcinoma of the face more than 700 grains were locally applied during the course of a week without any injurious effect, great relief being obtained.

REPORTS OF LUNATIC ASYLUMS FOR 1896-97.

Joint Counties Lunatic Asylum, Caermarthen (1896).—During the year there were 137 cases admitted, 29 recoveries, and 50 deaths. The number of post-mortem examinations made was 48; from a pathological point of view this is a very satisfactory record. It is abundantly evident that in the majority of the lunatic asylums throughout the country increased attention is now being paid to pathological work, and in many institutions facilities are provided for the prosecution of original research. In this way much important information of scientific value must accumulate—information too valuable to be buried away in case-books and records and thereafter lost sight of. It is a moot point whether the pages of asylum reports are utilised to the best advantage, and if some space were allotted to the publication of any interesting pathological data garnered during the year the value of these reports would undoubtedly be materially enhanced. In its clinical aspect Dr. Goodall's report is decidedly above the average, and he alludes to several topics which have recently attracted attention. His remarks on the influence of heredity in the causation of insanity, and his powerful advocacy of a systematic examination for the detection of stigmata amongst the insane and also among criminals are deserving of more than passing notice. He suggests the erection of a separate institution for the idiot and imbecile class in the principality, and emphasises the benefits that accrue from the early medical treatment of insanity.

Dorset County Lunatic Asylum (1896-97).—Dr. Macdonald's reports always afford fresh and invigorating reading, and his account of the past year's work forms no exception to the rule. A feature in the management of this asylum is the open-door system. With the exception of the door which divides the two sexes no door on either side is locked, and the patients on each side have free liberty of movement to other wards and to the grounds. The admissions numbered 213, the recoveries 46, and the deaths 42. Dr. Macdonald calls attention to the large number of first admissions amongst the county cases, and states that each year there is a greater number of cases which may be termed instances of early mental confusion and instability. For this condition of things he is inclined to think that the educational code is not altogether free from blame. In many districts no special provision exists for the education of children who are below the average in intelligence, consequently a percentage of boys and girls are forced and crammed beyond their natural abilities, with the result that permanent harm ensues. Regarding the causation of insanity the influence of hereditary predisposition is specially noted, and some trenchant remarks are made concerning the evil consequences of matrimonial contracts among the mentally weak and tainted members of the community. The Commissioners in Lunacy report very favourably on the management and condition of the asylum, which is now lighted by electricity and warmed throughout by artificial heat.

St Andrew's Hospital for Mental Diseases, Northampton (1896).—Structural alterations to a considerable extent have been in progress. The history of the institution has been uneventful during the year and the working of the hospital has been satisfactory in every respect. The Commissioners in Lunacy express their satisfaction with the state and surroundings of the patients, and speak with approval concerning the large number of inmates who are induced to work. The percentage of recoveries to the total number of admissions was 46·90; the death-rate was exceptionally low, being 3·59 per cent. of the average daily number resident.

Isle of Wight County Asylum (1897).—First Annual Report).—This asylum, which is situated near the town of Newport, was opened for the reception of patients in July, 1896. The present accommodation provides for 260 patients, and in addition a detached block for 50 private patients has been constructed. The water-supply is from a deep well, and it has been reported on in favourable terms. The lighting is electrical, worked by dynamos on the spot. The wards and passages are heated by hot-water pipes. The Lunacy Commissioners were favourably impressed with the condition of the asylum, and they view encouragingly the practice of affording parties of patients extended exercise beyond the asylum grounds, believing it to be of great importance in the treatment of the insane. The anxious and onerous duty of opening the new asylum was accomplished in a manner which reflects great credit on the administrative skill of Dr. Shaw, the medical superintendent.

Surrey County Lunatic Asylum, Brookwood (1897).—Overcrowding with its attendant evils has brought this institution into a somewhat unsatisfactory condition. The asylum provides accommodation for 1050 patients, but for the past three years the number of inmates has averaged 1077, and on several occasions the population has for a short time been over 1100. The situation demands the immediate attention of the asylum committee and the county authorities. There is imperative and immediate need for the enlargement of the existing institution, or for the building of a new asylum. The difficulties of the management are great and numerous, and it is not surprising that Mr. James E. Barton, the medical superintendent, reports the general health as only fairly good. He states that the over-pressure has been especially felt on the female side, where, in addition to a large number of old and feeble patients, there are many cases requiring special supervision and also many turbulent and violent women. During the year there were 288 admissions, 91 recoveries, and 109 deaths. The death-rate amounted to

10·06 per cent. of the daily average number resident. The services of an additional assistant medical officer are obviously required.

Hereford County and City Lunatic Asylum (1897).—Owing to lack of accommodation it was found necessary to make a conditional closing order, restricting the number of admissions. Before having recourse to this stringent measure, inquiries were made as to the feasibility of boarding out a number of imbeciles and harmless dements with relatives and others. Many of the friends, however, appeared disinclined to receive their insane relatives, and the accommodation offered by those who were willing was generally found to be unsuitable. Owing to these and other causes the project had to be abandoned. During the year 70 patients were admitted, 40 recovered, and 23 died. Nearly one-sixth of the male admissions suffered from general paralysis, a proportion much above the average. The general health of the patients was good. Influenza, which has been more or less endemic since 1890, was the main cause of ill-health. In connexion with this disease Mr. C. S. Morrison records a rather curious fact. He states that the influenza poison had the effect in many instances of bringing the deluded and chronic maniac into a more introspective frame of mind, and from being wild and troublesome the patient subsided into a more orderly, if somewhat moody, individual. It would be interesting to know whether the mental change so produced was permanent or only temporary in character, and further information on the point would be welcome. It is well known that all acute bodily diseases have the effect of more or less modifying the symptoms of mental derangement, but it is generally understood that in the majority of cases the sensory disorder resumes its sway as the physical symptoms subside.

Newcastle-upon Tyne City Lunatic Asylum (1896).—The average daily number resident during the year was 467. The admissions numbered 137, the recoveries 49, and the deaths 54. Amongst the admissions there were 26 cases of general paralysis, 4 epileptics, 8 congenital imbeciles, and 11 cases of senile insanity—all incurable cases. In 40 instances the causation of insanity was attributed to moral factors—viz., domestic trouble, adverse circumstances, and mental anxiety; intemperance in drink caused mental disorder in 50 instances; hereditary predisposition was ascertained in 29 cases. The death-rate was high, but this is hardly to be wondered at, considering that twenty patients died from general paralysis, and nine from phthisis. The report of the Commissioners in Lunacy indicates that Dr. Callcott manages his asylum with care and ability. They state that they found all parts of the asylum in excellent order, the day-rooms bright and cheerful, and facilities for the amusement of the patients plentiful.

Kirklands Asylum (1897).—The work of the asylum has been carried on in a quiet and uneventful manner. The health of the patients has been on the whole excellent. There were 22 entries in the Register of Restraint and Seclusion referring to the restraint of 6 patients at various times and for various reasons. Dr. Skeen thinks that restraint is sometimes beneficial, and bases his opinion on the following grounds. It ensures rest and warmth at night; it obviates the necessity for the employment of sedative drugs, which are often injurious and can only be used with extreme caution in those old and debilitated persons who constituted the class of patients to whom restraint at night was applied; further, the judicious use of restraint also relieves the nursing staff, especially at night, of a vast deal of anxiety without in any way reducing the responsibility, and therefore without inducing a tendency to carelessness and inattention towards the patients under their care. In these progressive days such opinions may appear somewhat heterodox, but there can be no doubt that there is something to be said in favour of Dr. Skeen's views. The admissions were 63; 30 patients recovered, and 18 died. The Lunacy Commissioners (Scotland) comment favourably on the general management of the asylum.

Barony Parochial Asylum, Lenzie (1896).—In a short report Dr. Blair states that of 313 patients admitted, the causation of insanity in 70, or 22·3 per cent., was ascribed to organic changes in the cerebro-spinal system, and of these nearly 11 per cent. were general paralytics and 6 per cent. epileptics. Alcoholic excess was ascertained to be the cause in 17·6 per cent., which is about 5 per cent. more than the records of late years. The extension and improvements which have been effected within recent years make this asylum one of the best equipped institutions for the insane in Scotland.

THE VACANCY IN THE GENERAL MEDICAL COUNCIL.

FOR the information of those who may intend to seek the suffrages of the profession for the seat on the General Medical Council as a Direct Representative, rendered vacant by the resignation of Dr. Rentoul, we would point out that procedure is regulated strictly by the Act of Parliament. The first step has already been taken by the President, who has notified the vacancy, and the rest follow as a matter of course. They are:—

Notice of election to be published	Sept. 10th.
Precept to be issued by returning officer	Sept. 25th.
Final day for receipt of nomination papers ...	Sept. 27th.
Meeting of the English Branch Council to receive precept	Sept. 28th.
Issue of voting papers	Oct. 2nd.
Last day for return of voting papers...	Oct. 9th.
Counting of votes	Oct. 11th.
Meeting of Branch Council to certify result of election	Oct. 15th.
Declaration of poll by the returning officer	Oct. 15th or 16th.

We have received the following addresses from candidates:—

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

GENTLEMEN,—By the resignation of Dr. Rentoul a seat in the Medical Council has quickly become vacant, and is to be filled as the will of the electorate may determine. I beg leave, therefore, to represent to you my readiness to stand as a candidate for the honour of your suffrages, and to state that the principles I ventured to lay before you previous to the last election are those which I would now submit as mine. They are detailed in THE LANCET of Oct. 31st last year on page 1253; and as bearing upon the whole of the paragraphs there written I would say that the Direct Representatives should act with the other members of the Council in full confidence that all are engaged in seeking the welfare of the profession; but at the same time he should realise the special business which belongs to him as the representative of the general practitioner, and be ready to act according to the dictates of common sense, as the opportunities for his intervention may occur.

The number of gentlemen who availed themselves at the last election of their privilege as voters was unusually small; and this fact gave opportunity to those who are not friendly to the representation of the general practitioner upon the Medical Council to comment adversely to our interests in this particular. It will be a pity if these comments should appear justified on the present occasion, for while the whole profession of medicine has greatly advanced as a science and an art, to the benefit of the individual, so now it is surely moving, by the force of its intrinsic national importance, towards that dignified position in the State which farseeing men have in the past predicated for it; and who are they that should show interest in this movement of our common profession if the bulk of us who practise it do not? The answer should be given in a good poll next month.

The gentlemen who stood so well by me last November may see fit again to support my candidature. To them, therefore, as well as to those others who will do me the like honour, I would submit that anything approaching an active candidature otherwise than through the medical press is entirely beyond my power. Hence I would respectfully ask them to acquit me of any discourtesy in not communicating with them directly, and to generously use their influence for securing votes in favour of the principles I have enunciated. Because if each voter will in his goodness consider himself a centre for influencing others, success is to that extent rendered, if not absolutely certain, at all events more likely.

In conclusion, I beg to state that if I be elected your representative the tone of my influence at the Council Board will be the tone of this address. But if I be not elected, in whatever place my name may appear, I shall be ready to believe that the choice of the electorate had fallen upon a man whose sentiments are not less worthy than those which I myself hold. In this assumed case, however, I should add that his capacity and his willingness to serve your interests would probably be in no way greater than my own.

I am, Gentlemen, your faithful servant,
E. DIVER, M.D. St. And., M.R.C.S. Eng.

TO THE REGISTERED MEDICAL PRACTITIONERS OF ENGLAND AND WALES.

Sept. 14th, 1897.

LADIES AND GENTLEMEN,—I beg to offer myself as a candidate for the present vacancy amongst the Direct Representatives on the General Medical Council. I am encouraged to take this step by the fact that at the election last November I polled 4062 votes, and was therefore at the head of the unsuccessful candidates, and that I have now received the assurance of the support of the Incorporated Medical Practitioners Association and of other medical bodies. It is my duty once more briefly to state my views on the crucial questions of the day in their relations to the General Medical Council.

I venture to traverse the opinion which has been influentially expressed that the Midwives Bill does not concern the Council. To my mind, the fact that the Government have sought the opinion of the Council on the matter proves that the question is one of vital importance to the medical profession, and therefore deserves the most careful attention of its governing body. From this it follows that the opinions

of the great body of the profession which is strongly opposed to midwives legislation shall be represented on the General Medical Council.

If elected I should also advocate:—

1. Reform of the Medical Acts so that the Council should be, at any rate, in a larger proportion than at present, elected by, and representative of, the profession generally.

2. The assimilation of the Acts governing the profession more nearly to those which govern the legal profession. By this means more power would be given to the General Medical Council to protect the public against quacks and unqualified practitioners.

3. The raising of the standard of entrance examination and the establishment of one conjoint compulsory examination for each division of the United Kingdom.

Finally, if you do me the honour to elect me as one of your Direct Representatives, I would devote my whole energies to fulfil the trust reposed in me. I have the honour to be, ladies and gentlemen,

Your obedient servant,

GEO. JACKSON, F.R.C.S. Eng.,
Vice-President and Ex-President of the Incorporated Medical Practitioners Association; Vice-President and Ex-President of the Devon and Cornwall Branch of the Incorporated Medical Practitioners Association.

OUR FRONTIER TROUBLES IN INDIA.

THE Government of India has been subjected to much adverse criticism for its want of promptitude in not advancing up the Khyber and at once recovering the positions captured by the Afridis. No doubt a decrease of British prestige attended our loss of Lundi Kotal and Ali Musjid, although these were held by native levies only. But there are other points to be considered besides promptitude of action; possible failure has to be guarded against, and means have to be taken to ensure that the force is strong enough and sufficiently provisioned to hold the posts when captured as long as required. It is comparatively easy under the present system of military organisation and administration in India to mobilise and concentrate a force on any given point of the Indian frontier, but for mountain warfare against the Afridis and other tribes a large amount of animal transport is needed, as well as an abundance of food and stores to maintain an army in the field until we can ensure sufficient security for future peace before the forces are withdrawn. Moreover, the season has hitherto been bad as regards the health of the troops of any expeditionary force. Up to the middle of September the heat in the valleys is very great, but a month later there is a great change in this respect: the valleys are much cooler and the mountains are very cold, and the climate is much more favourable for our operations. The strength of the forces under the respective commands of General Blood and General Elles should make it pretty certain that the rising of the Momands will soon be overcome, and the punitive expedition to Tirah, the centre of the Afridi territory, will deal with and crush the power of the Afridis. We do not at all believe that a combined and simultaneous action among *all* the tribes on the north-west frontier can take place, but the extent and general character of the rising on this occasion indicate that there must be some common cause in operation for the wide-spread feeling that undoubtedly exists. This is attributed at Peshawar to the strong resentment that is felt amongst the tribes against our occupation of the Swat Valley, which is being interpreted as annexation by the mullahs. Be this as it may, the time has now come for the rising to be forcibly put down with as little delay as practicable. It already looks as if there were a combination of the Oraksai and Afridi tribes—a combination which is new in border history. There has of late been a good deal of sharp fighting in various directions, and the hostile tribes have made several resolute attacks on our forces. Anyone looking at a map of this mountainous and nearly sterile country will easily appreciate its obstacles and difficulties as a scene for military operations and can form some idea of the amount of animal transport required for the conveyance of ammunition and warlike stores and commissariat supplies. The supply of water for the troops during the hot season will also prove a difficulty. The expense attending this frontier warfare is very great, and in the present embarrassed state of Indian finance this is greatly to be deplored. We are glad to learn that the wounded are doing well and that the health of the troops engaged is good, that the pluck and endurance of the native and European troops are admirable, and that the great mass of the population in India is well affected to British rule. That there will be a successful ending to the present state of affairs may be regarded as certain, but it is also certain that it will cost a great deal of money and necessarily much loss of life to bring this about.

The extent of the rising and the nature of the country will probably require a large force divided into different columns operating in different directions, with, of course, a common object in view, and it may possibly take a longer time to achieve complete success than many people imagine. The diseases to which the troops will be liable will be various forms of fever—mainly of a malarious type—and dysentery. Cases of enteric fever among the British troops will also occur, but it is scarcely likely that this fever will prevail to any extent during the cold season. Among the native troops and the native followers malarious fever, dysenteric-diarrhœa, and pulmonary diseases are almost sure to prevail; but as regards the latter much may be done to prevent their occurrence by an adequate supply of clothing and blankets, the avoidance of overcrowding, and the provision of plenty of food. During the last Afghan wars there was an enormous amount of sickness and mortality among the camels and baggage animals. Mules and ponies are hardier and much superior to camels as transport animals for expeditions of this kind.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Condition of Swanage, by Dr. S. W. WHEATON.—Swanage is one of a by no means small number of watering-places which profess to attract to themselves persons who are seeking health as well as pleasure, but which persistently maintain conditions that are not only a constant risk to health but which actually amount to obvious nuisance. The inspection dealt with in the report now before us is the third which the Local Government Board have found it necessary to make at Swanage within a comparatively brief period. In 1886 inspection became necessary by reason of a severe epidemic of enteric fever; in 1893 Swanage was one of the suspicious places in England which were especially selected for a visit when the country was exposed to the European prevalence of cholera; and now, again, in 1897 we have another visit and report by reason of the frequent complaints which are made as to the nuisances prevalent in the place and as to the maladministration of the urban district council. The main grievance arises in this way. The town borrowed £6000 in 1893 to provide sewers converging to an outfall sewer discharging into the sea below low-water mark north of the southern headland bounding Swanage Bay. But, having performed one part of their undertaking, the urban council seemed to think they had done enough. The consequence is that the new sewers have been turned into an old culvert discharging on the foreshore, that the old sewers have not been removed, that many dwellings have not been connected with the new system, that in places the old and new sewers run side by side, the old one receiving sewage and the new one none, and that, to quote Dr. Wheaton, "the £4500 spent have so far been of very doubtful benefit." The bathing places, to which visitors of both sexes are attracted, are also stated to lie "between two points of discharge for sewage." But these are not all the insanitary features of Swanage. Vault privies still seem fairly general notwithstanding the money spent on sewers, and they are so constructed that there is always more or less escape of their contents into the surrounding soil. The cleansing of these structures and the renewal of ashpits is left to occupiers, unless they apply to the urban council, who then make a charge for the work. This we believe to be absolutely illegal. The Public Health Act of 1875 only recognises two methods—one in which the work is undertaken by, and at the cost of, the occupiers; and the other in which it is undertaken by the sanitary authority at the cost of the ratepayers. But further, the Swanage Urban Council will not even learn by experience. In 1886 the outbreak of typhoid fever was due to milk, and they were urged by the Local Government Board

to draw up regulations to control their cowsheds and dairies; but they have done nothing of the sort, and "the condition of the majority" of the cowsheds "is filthy." There are other matters to which we might advert; but we have said enough to indicate the imperative need for some further visit to, and report on, Swanage early next spring; so that those who seek health and wish to avoid nuisance and risk of danger to health may be advised where to seek it in the autumn. If the inhabitants of a district profess to cater for the public health—and Dr. Wheaton says the majority are here engaged in supplying the wants of visitors—they have a duty towards the public; and it is of the utmost importance that this should be understood.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birkenhead Urban District.—Dr. Sydney Marsden advocates that the City of Birkenhead shall, under the provisions of the Shop Hours Act, 1892, reduce the hours of barmaids to seventy-four per week. He states that in some hotels more than a hundred hours per week are exacted from these persons. The low standard taken up by the Somerset House authorities as regards milk is matter for Dr. Marsden's comment; he thinks that the excuse so often urged that the poor quality of the milk is due to the fact that the cow is out of condition should not be allowed the weight so often attached to it. Even if the excuse be true, the cow's milk should, Dr. Marsden urges, not be sold, and the cow should be withdrawn from use until its health be improved. Under the heading of "Death-rates of insanitary areas" the following table, which speaks for itself, is given:—

Average for 1886–93.

—	Population.	Death-rate per 1000.	Zymotic death-rate.
Whole Borough...	99,688	19·8	3·1
Area No. 1	106	72·6	13·2
,, ,, 2	80	42·5	10·0
,, ,, 3	112	63·3	15·0

The population of the area is obviously a small one, and it would be interesting to know the age-distribution. From an analysis of the figures and of the causes of death Dr. Marsden thinks that the effect of living in these insanitary areas is more especially to lower the general system of the individual. It is certainly necessary to be very cautious in drawing conclusions from the death-rates of insanitary areas, as it is to such areas that the helpless and old, and the poor with large families, are drawn by the force of circumstances, the death-rates often being rather an expression of social conditions than the direct effect of an insanitary area.

Nottingham Urban District.—Enteric fever is unduly prevalent in Nottingham, and Dr. Philip Boobbyer is by no means content that it should be so. Nottingham is clean, well-sewered, and is provided with a supply of pure water. Why, then, should it have had its enteric fever death-rate during 1896 exceeded by only three of the other great towns—i.e., Sunderland, Bolton, and Wolverhampton. Upon this subject of excessive prevalence of enteric fever Dr. Boobbyer is preparing a special report, but in the meantime he furnishes certain figures in his current annual report which are instructive and, by virtue of the number of years to which they have reference, valuable. For each year from 1887 to 1896 inclusive there has been an altogether exceptional incidence of enteric fever upon houses furnished with privies as compared with those furnished with pail closets and water-closets, the rate on the pail houses being much higher than that on the houses with water-closets. The same remarkable incidence has obtained in each year during the period referred to, and the total figures for the ten years are thus summed up: (*a*) pail-closet houses, one case of enteric fever in 120 houses; (*b*) midden-privy houses, one case of enteric fever in 37 houses; and (*c*) water-closet houses, one case of enteric fever in 558 houses. These interesting and, as has been observed, constant results are not to be explained away by the criticism that enteric fever may be expected to be exerting its greatest influence on the poorer property provided with midden-privies and with pail-closets. The privies seem to be very scattered and not confined to any one part of the borough, some of them being attached to a good class of houses. Similarly water-closet houses are not confined to the better parts of the town. It seems, too, that there is a marked tendency on the part of enteric fever to spread in houses provided with such closets as retain the excrement on the premises. The pails used in Nottingham are constructed of wood, and Dr. Boobbyer is of opinion that their influence for evil in the matter of enteric fever is due to the absorbent character of the wood; steel drums should, he thinks, be used in the absence of a water-carriage system.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6795 births and 4089 deaths were registered during the week ending Sept. 11th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 29·5 to 20·7 per 1000, further fell last week to 19·4. In London the rate was 16·3 per 1000, while it averaged 21·5 in the thirty-two provincial towns. The lowest death-rates in these towns were 8·2 in Halifax, 9·5 in Croydon, 11·3 in Cardiff, and 11·4 in Swansea; the highest rates were 26·9 in Liverpool, 28·5 in Hull, 31·1 in Wolverhampton, and 35·3 in Preston. The 4089 deaths included 945 which were referred to the principal zymotic diseases, against 1783 and 1272 in the two preceding weeks; of these, 671 resulted from diarrhœa, 78 from whooping-cough, 65 from measles, 52 from "fever" (principally enteric), 48 from diphtheria, and 31 from scarlet fever. The lowest death-rates from these diseases were recorded in Swansea, Halifax, Cardiff, and Derby; and the highest rates in Sheffield, Leicester, Salford, Hull, and Preston. The greatest mortality from measles occurred in West Ham, Manchester, Oldham, and Preston; from scarlet fever in Bolton; from whooping-cough in Liverpool and Oldham; from "fever" in Sunderland; and from diarrhœa in Leicester, Salford, Preston, Leeds, Hull, and Newcastle-upon-Tyne. The 48 deaths from diphtheria recorded last weeks in the thirty-three towns included 25 in London, 4 in Birmingham, 4 in Leicester, and 3 in Liverpool. No death from small-pox was registered during the week under notice in any of the thirty-three towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital which had been 3400, 3448, and 3528 at the end of the three preceding weeks, had further increased to 3579 on Saturday last, the 11th inst.; 376 new cases were admitted during the week, against 340, 356, and 371 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 102 and 116 in the two preceding weeks, were again 116 last week, and were 37 below the corrected average. The causes of 48, or 1·2 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Nottingham, Bradford, Leeds, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 and 18·1 per 1000 in the two preceding weeks, rose again to 18·3 during the week ending Sept. 11th, but was 1·1 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·3 in Paisley and 15·3 in Perth, to 19·9 in Edinburgh and 22·0 in Greenock. The 545 deaths in these towns included 63 which were referred to diarrhœa, 15 to whooping-cough, 7 to diphtheria, 5 to scarlet fever, 5 to "fever," 2 to measles, and 1 to small-pox. In all, 98 deaths resulted from these principal zymotic diseases, against 137 and 127 in the two preceding weeks. These 98 deaths were equal to an annual rate of 3·3 per 1000, which was 1·2 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 147 to 84 in the three preceding weeks, further fell to 63 last week, of which 29 occurred in Glasgow, 14 in

Edinburgh, and 7 in Dundee. The 15 deaths from whooping-cough also showed a further decline from the numbers recorded in recent weeks, and included 9 in Glasgow and 2 in Edinburgh. The fatal cases of diphtheria, which had been 1 and 4 in the two preceding weeks, further increased to 7 last week, of which 3 occurred in Glasgow, 2 in Edinburgh and 2 in Aberdeen. The deaths from scarlet fever, which had risen from 5 to 10 in the three preceding weeks, declined again to 5 last week, of which 2 were recorded in Glasgow and 2 in Edinburgh. The 5 deaths referred to differrent forms of "fever" included 3 in Glasgow, where the fatal case of small-pox also occurred. The deaths from diseases of the respiratory organs in these towns, which had been 78 and 69 in the two preceding weeks, rose again to 78 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 30, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·0 and 23·1 per 1000 in the two preceding weeks, declined again to 22·4 during the week ending Sept. 11th. During the past ten weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 20·5 in London and 18·2 in Edinburgh. The 150 deaths registered in Dublin during the week under notice showed a decline of 5 from the number in the preceding week, and included 28 which were referred to the principal zymotic diseases, against 39 and 33 in the two preceding weeks; of these 16 resulted from diarrhœa, 4 from "fever," 3 from diphtheria, 3 from whooping-cough, and 2 from scarlet fever. These 28 deaths were equal to an annual rate of 4·2 per 1000, the zymotic death-rate during the same period being 2·6 in London and 3·7 in Edinburgh. The fatal cases of diarrhœa, which had been 32 and 25 in the two preceding weeks, further declined to 16 last week. The 4 deaths referred to different forms of "fever" exceeded the number recorded in any recent week. The fatal cases of diphtheria, which had been 2 and 4 in the two preceding weeks, declined again to 3 last week. The 3 deaths from whooping-cough corresponded with the number recorded in the preceding week. The 150 deaths in Dublin last week included 42 of infants under one year of age and 18 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. One inquest case and 2 deaths from violence were registered; and 50, or one-third, of the deaths occurred in public institutions. The causes of 13, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN WRIGHT embarks shortly for Malta. Surgeon-Major Beevor is held in readiness for service in India. Brigade-Surgeon-Lieutenant-Colonel J. Macnamara is ordered to embark for Malta in the transport *Aroca*. Surgeon-Captain Tate is ordered to join at Woolwich for duty. Surgeon-Major Smythe and Surgeon-Captain Tatham embark at the Royal Albert Dock on board the transport *Aroca*.

Surgeon-Lieutenant-Colonel Aylmer E. Hayes, D.S.O., retires on retired pay. Surgeon-Major Robert C. Gunning to be Surgeon-Lieutenant-Colonel.

Royal Horse Guards: Surgeon-Captain Horatio R. O. Cross, from 1st Life Guards, to be Surgeon-Major, vice H. Mitchell, retired.

Grenadier Guards: Surgeon-Major Charles R. Kilkelly, M.B., from Army Medical Staff, to be Surgeon-Major, vice W. C. Beevor, M.B., who exchanges.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers are replaced at the disposal of the Military Department:—Surgeon-Captain Brogden, A.M.S., Surgeon-Captain Bray, A.M.S., Surgeon-Captain Clark, A.M.S., Surgeon-Captain Boyle, A.M.S., Surgeon-Lieutenant Evens, A.M.S., Surgeon-Lieutenant Milner, A.M.S., and Surgeon-Lieutenant Rainier (Bengal). The services of Surgeon-Captain Dallas, Civil Surgeon, Chanda, and Surgeon-Lieutenant Mathew, Medical Officer in Charge of Famine-relief Works, Raipore, are temporarily replaced at the disposal of the Government of India, Home Department. Surgeon-Captain Dyson and Surgeon-Major Nariman have respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Gujerat Registration District. Surgeon-Major W. K. Hatch to be Principal, Grant Medical College, Bombay, vice Brigade-Surgeon-Lieutenant Colonel G. A. Maconachie, retired; Surgeon-Captain Herbert to be Professor of Ophthalmic Medicine and Surgery, and Professor of Comparative Anatomy and Zoology, Grant Medical College.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Richard Samuel Purnell Griffiths has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets, in Her Majesty's Fleet. Surgeon Frederick William Collingwood has been placed on the Retired List of his rank.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major John J. A. Raye resigns his commission. The under-mentioned officers having resigned their Volunteer appointments, cease to belong to the Army Medical Reserve of Officers:—Surgeon-Lieutenant H. W. Joyce and Surgeon-Lieutenant W. A. Wetwan.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant Luigi Walter Alfred Keiffenheim-Trubridge, M.D., from the 3rd Kent Volunteer Artillery, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Royal Engineers: 2nd Cheshire (Railway): Surgeon-Lieutenant T. C. Bailey to be Surgeon-Captain.

THE REVOLT OF THE BORDER TRIBES.

Those medical officers who took part in the last Afghan campaigns, of whom there must be many in this country and abroad on foreign service, will follow the news with great interest from India regarding the rising of the tribes occupying the large extent of territory intervening between India and Afghanistan. The brilliant relief of the forts on the Samana Range by General Yeatman Biggs's force is most satisfactory. The most unsatisfactory item in the latest intelligence is, perhaps, that regarding the block or breakdown in the railway arrangements for the conveyance of the animal transport to the frontier. It is largely a repetition of the old difficulty, that which so hampered the movements of every branch of the service on the occasion of the last Afghan campaigns. It is needless to say that armies cannot move without transport, and in the mountainous belt of territory occupied by the independent tribes animal transport, being the only practicable one, is essentially necessary. The delay which will be caused by the block on the Indian railway of the North-West is a most unfortunate occurrence at the present moment, because an immediate advance is now of vital importance, with the view of striking a heavy blow against the opposing tribes and so preventing any further spread of the rebellion. Medical officers will recall the difficulties they experienced in "the rush" to the front, and those which afterwards followed in the movement of the field hospitals and hospital stores, and in the transport of the sick and wounded, on the occasion of the Afghan campaigns, although there was no such block on the railways as is reported to exist now. The unexpected is that which happens, and it is only fair to add that this great rising of the frontier tribes was a perfectly unexpected occurrence; still, it might have been imagined that the first thing to be done would have been the dispatch of officers to see that adequate railway arrangements, or the best that could be made under the circumstances, were made for the enormous increase of traffic to Peshawar and the North-West frontier. The difficulties to be overcome in the way of medical organisation and hospital administration for the different columns in the field will impose a great strain on the medical services. The military department of the Government of India have now had some weeks at their disposal in which to make their arrangements. They have a very large and splendid force at their command, and we can only confidently hope that the necessary transport will speedily be made available where it is so urgently wanted.

THE SOUDAN CAMPAIGN.

What with the widespread revolt of the border tribes on our Indian north-west frontier, South African affairs, the Soudan expedition, the Greco-Turkish war conference, and the condition of Crete, the Government has its hands full of difficult and anxious problems at the present time. Now that the Sirdar (Sir H. Kitchener) is on his way to the front we may soon expect to hear of some important movement of the Soudan expedition; meanwhile, Berber has been taken and occupied. The present position of affairs seems to be that garrisons have been established along the Nile at Dongola, Debbeh, Korti, Merawi, Abu Hamed, and Berber. There are five gunboats above Abu Hamed. A series of posts, held by friendlies, has been established extending across the Bayuda desert and completely covering the river. The whole of the tribes in the Desert are reported to be friendly. One hundred and sixty-five miles of railway have been completed. The Dervishes are in strong force at Metemmeh; those of them who retreated from Derber were attacked by General Hunter's gunboats and force, and fled into the Desert abandoning their stores. Osman Digna is reported to be on the banks of the Atbara River. The Egyptian forces are in good health and spirits. The hospital and medical arrangements are working well, and arrangements generally are being completed during the present lull for any future movement that may take place. The Khalifa's forces at Khartoum are said to number 60,000 men. With the railway and Nile transport available Sir H. Kitchener can bring up his supplies for his force, but whether he will soon start for Metemmeh and then for Khartoum o not still remains to be seen.

MEDICAL EXAMINATION OF ARMY CANDIDATES.

A correspondent writing to the *Times* of Sept. 1st under the designation of "Suum Cuique" hits the mark in his remarks upon the late rejection of a successful candidate when he says that the War Office authorities have expressly warned parents and guardians that candidates for army commissions should be medically examined before commencing a special course of study for the competitive examination; and he inquires whether this was done in the case referred to. He adds that while, thanks to the present regulations, the physique of our young officers is excellent, the eyesight of too many of them is not so good as it ought to be. Candidates are now passed as fit with only one-sixth of normal vision. With such a degree of defective sight an officer might easily be placed under circumstances where he could not efficiently fulfil the military requirements of the occasion, and in night attacks, when the light is very little, a man with only one-sixth of normal vision would be practically blind. This is a matter which apparently requires to be looked into.

MEDICAL ARRANGEMENTS FOR THE FRONTIER.

The *Army and Navy Gazette* says: "The medical arrangements for the different brigades, divisions, and columns operating on the various lines of the frontier has necessitated much work and thought on the part of the Principal Medical Officer of Her Majesty's Forces in India, Surgeon-Major-General Gore. Some 23 British and native field hospitals have had to be mobilised in the proportion of about 7 British and 16 native hospitals. Further, 2 British and 2 native general hospitals have been established with field medical store depôts. The number of Army Medical Staff officers employed is approximated at 31, while some 65 Indian Medical Service officers have also been detailed."

THE SICKNESS IN BOMBAY.

As we have previously stated, the city of Bombay is still very unhealthy spite of the cessation of the plague. The prevailing epidemics of cholera, fever, and dysentery are, according to the *Times of India* of the 27th ult., continuing in evidence and in unabated severity. The death-rate is as high as 59·75 per 1000. The chief cause of the increase has been cholera, which has existed in Bombay in a more or less epidemic form for the last six weeks, but is now beginning to show a sensible decline. The fever mortality and that from dysentery continue to be high. The late plague and the results of famine, in addition to the presence of insanitary conditions, have no doubt lowered the health of the population and their power of resistance to disease-causes generally.

THE PLAGUE AT POONA.

The number of cases of plague in the special hospital is somewhat increasing. There were fifty-eight cases in hospital towards the end of last month, and some deaths from plague had occurred among the native troops in the Poona cantonment. In the Kirkee cantonment also several fresh cases of the disease had been admitted to hospital and many deaths had taken place.

Correspondence.

"Audi alteram partem."

THE ELECTION OF A DIRECT REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—Having been asked to allow myself to be nominated for the seat just vacated by Dr. Robert Rentoul as direct representative upon the General Medical Council, after careful consideration, I have decided not to do so on this occasion. The vacancy should, in my opinion, be filled by a northern representative, and should Dr. Samuel Woodcock, J.P., again come forward as a candidate I trust that all those members of the profession who accorded to me their votes at the last election will bestow them upon him at the present time. Dr. Woodcock is too well known by his works to require any introduction to the medical profession, and he would make an admirable representative; the fact that he is President of the Lancashire and Cheshire Branch of the British Medical Association should secure him the suffrages of at least the members of the Association and ensure his election. On another occasion arising, however, I shall, I hope, find myself in a position to accept the invitation to nomination should it be offered to me.

I am, Sirs, your obedient servant,

Hatfield, Sept. 15th, 1897. LOVELL DRAGE.

P.S.—Since writing the above I hear that Dr. Woodcock has refused nomination, but, at the same time, I understand that, as we have both refused, Mr. Victor Horsley has consented to come forward as a candidate. I believe that this consent of Mr. Horsley will be more than welcome to those who have the interests of reform in our profession at heart.

To the Editors of THE LANCET.

SIRS,—There can be little doubt, even in the minds of those who are as heartily in favour of the principle of Direct Representation as THE LANCET has shown itself to be, that recent occurrences have tended somewhat to discredit the principle as applied to the General Medical Council, and it therefore appears to be of the utmost importance that the profession, in choosing a successor to Dr. Rentoul, should assure itself as far as possible that there will be no likelihood of a repetition of the mistakes which have lately occurred, but that whoever may be chosen he should be one who is prepared to assist in carrying on the business of the Council as imposed upon it by the several Acts of Parliament under which it is constituted. One principal object, however, of having Direct Representatives on the Council at all appears to be that they may from time to time, as opportunity occurs, place before it in a temperate manner the views of their constituents on the various questions of professional interest which come before it—on such questions, for example, as the Midwives Bill, the increase of Direct Representatives, and the medical aid associations, to take but a few of the many important questions dealt with during the ten years that our representatives—Sir Walter Foster, Dr. Glover, and Mr. Wheelhouse—served us and the Council so well. The time is short before nomination closes to ascertain the opinions of any new candidates on these questions, and I would therefore suggest that if the Council of the British Medical Association could obtain the consent of Sir Walter Foster, whose actions on these subjects speak for themselves, to his nomination as a candidate, it would be very desirable that he should be sent back to the General Medical Council with the weight of practically the whole profession in England and Wales behind him.

I am, Sirs, yours faithfully,

Dulwich, Sept. 14th, 1897. H. NELSON HARDY.

"FORCIBLE REDUCTION OF POTT'S CURVATURE."

To the Editors of THE LANCET.

SIRS,—With reference to an annotation upon this subject in THE LANCET of Sept. 11th, it is to be hoped that those interested in the subject will observe the proportion of deaths recorded. Three deaths in thirteen cases, all within a week of the operation, is a large mortality, far exceeding that which occurs in treatment by careful fixation of the spine with general remedies. Forced extension without an anæsthetic carefully limited to the patient's powers of endurance is a far safer plan of treatment. It is one which I have been trying cautiously in a certain number of cases, and so far with good effects. For lateral curvature the forced reduction of the deformity promises, I think, excellent results. The patient should be placed upon a prone couch, the flat part of which should be long enough to support the whole length of the trunk. Then the surgeon standing over the patient is able to exert great power upon the projecting curves. It is of course necessary to keep up for a time, by mechanical means, the improvement made by manual force.

I am taking photographs of some cases treated in this manner in their different stages, so that I shall have some definite illustrations to prove the results of the treatment, notes of which I hope, with your permission, to publish in THE LANCET at some future date.

I am, Sirs, yours faithfully,

NOBLE SMITH.

Queen Anne-street, W., Sept. 13th, 1897.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 11th, at page 673, attention is drawn to the treatment of Pott's curvature by forcible reduction which has been recommended to the profession by Professor T. Jonnesco, of Bucharest. The annotation makes no mention of English writers in connexion with this treatment, which is described as "one of the most striking of the recent advances of surgery," although to them above all others is due the credit of the method; unfortunately, however, a long time has elapsed since the method was practised in England. The practice came to be abused, many patients dying under the forcible reduction. This abuse produced a pamphlet from Pott, which he dedicated to Dr. John Lewis Petit, one of the physicians to St. Bartholomew's Hospital. The brilliant successes attained by rest in spinal caries and the many fatalities by the old method in advanced cases stopped the practice. After Pott's death Sir James Earle put forward a plea for the resumption of forcible extension of the spine and pressure on the projecting knob in suitable cases; but he was as one crying in the wilderness. Pott's pathology of the disease had been approved by John Hunter, and succeeding generations swallowed both pathology, theory, and therapeutics without question until Lewis Sayre, of New York, re-introduced Earle's suspension head gear and a modernised form of his jacket. There were, however, in England surgeons at all times who possessed sufficient courage to think for themselves, and although Pott's great and just influence stayed the progress of spinal surgery it did not wholly arrest it, for we read in Abernethy's lectures on local diseases, for the publication of which we are indebted to the courage and enterprise of the Founder of THE LANCET, that in certain cases he recommended cutting down on the projecting spine. Abernethy thus describes the incident in his professional experience: "And it was proposed as a question, Could anything be done in this case? I said, 'I cannot tell you, except taking out the rings of the vertebræ.' But that was considered so hard an operation that it was not at all contemplated. ..... Yet such a thing has been done, and done in London, and at the very time this accident happened." I am, Sirs, yours truly,

Dublin, Sept. 14th, 1897. GEORGE FOY.

THE LATE DR. BRAXTON HICKS.

To the Editors of THE LANCET.

SIRS,—A very important omission occurs in your notice of the late Dr. Braxton Hicks in the matter of his discovery of the rhythmical movements of the uterus in pregnancy. I am writing away from all books of reference, but I think I am correct in saying that he discovered and established the point completely in his own work. The discovery lay for years neglected till I pointed out that it is by far the most trustworthy of all the signs of pregnancy. Even now it does not receive the prominence from writers of text-books which its value deserves.

I am, Sirs, yours faithfully,

Llandudno, Sept. 11th, 1897. LAWSON TAIT.

INFANT INCUBATORS.

To the Editors of THE LANCET.

SIRS,—In the interests of the general public we desire to call your attention to the fact that the success of our Infant Incubator Institution at the Victorian Era Exhibition at Earl's Court has attracted the notice of unscrupulous imitators. We are informed, for example, that various persons are calling upon, and writing to, members of the medical profession, hospitals, infirmaries, &c., asking for their support, and falsely representing that they are opening branch institutions in connexion with us, and asking for the loan of children to experiment with.

We consider, under these circumstances, that it is our duty to warn members of the medical profession, also nurses, parents, and all public institutions, not to entrust their children to any applicants whatsoever without first taking every precaution to assure themselves that they will not be made the victims of showmen, as well as of inexperienced and irresponsible persons who seek to trade upon the established reputation of an invention that has been recognised by both the medical and the lay press.

The institution at Earl's Court is the first of its kind in England, and we have not made any arrangements, nor have we given anyone authority to further exhibit, at any exhibition or place of public resort in the United Kingdom, so that all persons, no matter what their credentials may seem to be, making application for space and intimating that they have the power to exhibit Mr. Paul Altmann's invention should be classed as impostors.

We are, Sirs, yours obediently,

SAMUEL SCHENKEIN,

Earl's-court, S.W., Sept. 8th, 1897. MARTIN CONEY.

"IS 'MEDICAL DEFENCE' DEROGATORY TO THE DIGNITY OF MEDICAL MEN?"

To the Editors of THE LANCET.

SIRS,—It is to be hoped that the thoughtful and temperate letter of "Registered Practitioner" in THE LANCET of Sept. 4th has attracted the attention of the profession. There is no doubt that our governing bodies, from the General Medical Council downwards, do consider that the defence of the practitioner is derogatory to their dignity. The reason for this is plainly owing to the composition of these bodies and to their non-representative character. If it could be brought home to the eminent men who direct the policy of our councils and corporations that by a more liberal course of action they could do much to ameliorate the lot of thousands of their less fortunate *confrères*, I feel sure that they would not consider such action derogatory. Your exhaustive series of articles on the "Battle of the Clubs" give an idea of the pecuniary loss which the profession is suffering all over the country owing to abuses which are perfectly remediable if our governing bodies were willing to take them in hand. It is to be hoped that those suffering from these abuses will lose no opportunity of pressing them on the attention of the powers that be until their extent is fully realised. Doubtless the promotion of the scientific progress of our profession is all important, but surely the protection of the material interest of those who practise it is at least equally so.

I remain, Sirs, yours faithfully,

Sept. 13th, 1897. W. G. D.

WE have received from the Volunteer Ambulance School the syllabus of courses of instruction of the classes for the training of stretcher bearers, to be held at the headquarters of the London Rifle Brigade, 130, Bunhill-row, E.C., commencing at 7.30 p.m., on Monday, Oct. 4th, 1897. Surgeon-Major H. F. Stokes, of the London Rifle Brigade, the Senior Medical Officer Instructor, appears to have taken every precaution to make the course a thorough one.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XII.—BIRMINGHAM (*continued*).[1]

Origin of the Hospital Saturday Fund.—The Opposition to Weekly Subscription.—Workmen Pay Half the Expenses of the Hospitals.—Dangers of the Situation.—Dependence of the Hospitals on Working-class Financial Support.

THE Hospital Saturday Fund was established in 1874 on lines not only different from, but absolutely opposed to, those which are now followed. To-day its success depends on the careful organisation of a system of weekly contributions. The late Mr. Sampson Gamgee helped to convert the working men's fund for the extension of the Queen's Hospital into the Hospital Saturday movement. The first collection brought in £4705. After that there was a depression in trade; the collections were not so good, and sank in 1878 to £3134, which is the lowest figure on record. In 1882, after the tenth collection, which for the first time exceeded the inaugural collection, and amounted to £4888, Mr. Gamgee said: "The complete success of Hospital Saturday depends in no small measure upon the method of collecting the money, and this is a matter attended with no little difficulty. Acting on the experience gained with the working men's fund for the extension of the Queen's Hospital, our committee abstained most scrupulously from recommending any set method of collection. The recent incident which resulted in a workman recovering in a court of justice money said to have been stopped at a penny a week for Hospital Saturday is only recalled to point to a possible danger attending the system. The projectors of Hospital Saturday did not aspire to make it a success on the mere mechanical principle of 'many a little makes a muckle.' The penny-a-week system in factories and workshops is vastly older than Hospital Saturday, in instituting which it was hoped to sanctify a labour day by the sacrifices and loving thoughts of those yet blessed with strength to work on behalf of fellow-toilers laid low by injury or disease." Mr. Gamgee, so his fellow-committeemen said, in a public declaration on the subject, was "wedded to the idea of Hospital Saturday being a day of labour-sacrifice, and this was the foundation of the movement which he established. He strongly advised against our abandoning this as a method of collecting, and substituting for it the weekly method of contributing."

These quotations show that, if Mr. Gamgee did not foresee in full the complications that are now arising, he had in any case a very acute intuitive sense of the dangers ahead. If the object be to maintain hospitals on their present basis—that is, private initiative supported by voluntary contributions—then Mr. Gamgee's opposition to weekly collections was well founded. If, on the contrary, the object be to so reduce the contributions of the wealthy classes while so increasing the controlling influence of the working classes, as to render the demand for the municipalisation of the hospitals almost irresistable, then the present policy is right and the objections raised by Mr. Gamgee were wrong. In any case, the policy of collecting weekly contributions was ultimately adopted and has given the most brilliant financial results. This, of course, has not been attained merely by the line of policy followed. The success is due in a large measure to admirable organisation and to the energetic impulse given to the movement by the able and eloquent leadership of Mr. Smedley. This gentleman who is one of the leading accountants of Birmingham, unites to the wealth and exceptional business abilities which he possesses, a deep faith in the capacities of the working class. He further is able to impart to his speeches a humanitarian and democratic tone which goes to the heart of the working man. As a result, he has built up in a few years what seems to be one of the strongest and best organised working-class movements in the country. It is true that I do not believe he in the least understands the potentialities of the movement he has so skilfully organised; nor do I imagine Mr. Smedley fully appreciates the socialist conclusions which are the logical outcome of some of his speeches. Nevertheless, he has taught the working men of Birmingham socialist ethics, and this not in a theoretical, but in a most practical manner. Here are a few specimens of Mr. Smedley's eloquent teaching. I quote them from his speech delivered to the fourth annual *réunion* of old patients from the convalescent homes of Tynycoed and Marle, and delivered in the Birmingham town hall in November, 1895: "Still, our chief cause for pride lies in the convalescent homes which you [the workmen of Birmingham] have established." ..... "These homes are yours, as much yours as those to which you will return to-night. Not less yours because others share their advantages with you. It is only the selfish man—there are plenty of them living among us—who values what he has because others are without. There are men who derive pleasure from the thought that their possessions are greater than those of others. You value, I know, these homes in a far better manner because you rejoice that they are shared with you by others." Mr. Smedley then went on to show that, though these homes were managed exclusively by working men, they were well and economically managed, and this without vexatious rules and regulations, and further that they were conducted under the ruling principle that "if you want to be happy try to make those around you happy." "Make this the object of your lives," he exclaimed, "during the next twelve months, and I guarrantee it shall be the happiest you have ever spent. The only hope for the regeneration of the community rests with the working classes. I assure you of the well-to-do classes there are few who can spare time to bring about a great change. They are too much occupied with making and keeping their wealth, with the luxuries and pleasures they are able to obtain in spending it." ..... "If the objects of these societies (the Hospital Saturday Funds) are pressed forward with determination, there is no reason why the whole condition of the poorer classes should not be altered for the better and, in time, pauperism become practically extinct. We are under obligations to those amongst whom we live and move. Whether we recognise them or not we cannot get rid of them. I beg you, by the common interest we have in these homes, by the glimpses of happiness which we have obtained there—interest and happiness which have resulted from others recognising their obligations to you—to resolve that during the forthcoming year you will fulfil your obligations to others. I envy that man who, when the time has come for him to fall into that long last sleep which all must sleep—I envy that man who shall have the satisfaction of dozing off with pleasant recollections of the happiness he has been the means of bringing to others during his life. I care not what may be in store for you after that sleep; if your life has been spent in seeking happiness by giving happiness to others the dim and distant future can have no terrors for you, for you will carry with you the satisfaction of having brought that day nearer when misery and destitution shall be swept from our midst."

It is by steady, hard, plodding work, brightened and stimulated by such words as these, that, up to the date when they were pronounced, the working-class of Birmingham had raised for the medical charities of that town the princely sum of £156,459 10*s.* 6*d.* From 1873 to 1882 the collection fell a little under £5000 annually. In 1885 it exceeded £6000, it 1888 it amounted to £7689. In 1891 it was not far short of £11,000, and in 1895 it exceeded £13,000. For the last seven years the Hospital Saturday Fund, apart from maintaining its convalescent homes, its district nursing societies, and other institutions, has made a free annual gift to the medical institutions of Birmingham of £10,000. But it must not be forgotten that to obtain these enormous sums in pennies from the working classes it has been necessary to create an organisation by the side of which the trades unions, for instance, of Birmingham are feeble and impotent. Of course, Mr. Smedley will at once exclaim that his motives were of the purest, that pacific reform on humanitarian lines is his sole object; and I have not the slightest reason to doubt the truth of such an allegation. But Mr. Smedley will not always be there to guide and inspire the movements of the giant he has

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; (11) June 5th, 1897, Nottingham; (12) July 31st, 1897, Birmingham; (12 *continued*) Aug. 14th, 1897, Birmingham; and (12 *continued*) Sept. 4th, 1897, Birmingham.

created. He has done what the trades unions have failed to accomplish. He has united as financial members of one organisation democratically governed, that is to say, capable of throwing Mr. Smedley himself out of office, 75 per cent. of the working-men of Birmingham, and it is Mr. Smedley who is my authority for this statement. Again, I repeat all this is based on the best of motives; but good intentions are said sometimes to lead to undesirable places.

The working classes of Birmingham, now united and organised as they have never been united before, and collecting among themselves an income of at least £15,000 a year, constitute a power that may some day be utilised for many other purposes besides that of building convalescent homes and subsidising hospitals. Indeed, it has already been resolved to limit the subsidising of hospitals. However large the amount collected by the Hospital Saturday Fund, it has been decided that not more than £10,000 shall be given as a free gift to the hospitals. Whatever is done with the rest will mean a new departure, a revolution, in the administration of medical charities. Indeed, is this not already the case with regard to the convalescent homes? Formerly such homes were built by wealthy and benevolent people and managed by them with the aid perhaps of some of the medical staff. Now they are the exclusive property of the working men, who themselves decide who shall, and who shall not, go there. Undoubtedly these homes, and Mr. Smedley in the speech quoted above emphasises the fact, afford the working men far more satisfaction than the hospitals to which they nevertheless contribute a much larger sum of their money. Thus, according to the last published account I was able to obtain from headquarters, the receipts of the Saturday Hospital Fund for 1895 amounted to a total of £13,497, and out of this, the convalescent homes cost £2250; the committee £150; the District Nursing Society, for services of nurses to Hospital Saturday subscribers, received £100; a balance of £997 was carried over; and £10,000 were given to the hospitals. Thus we find that already twenty-three and a half per cent. of the money spent for medical relief by the Hospital Saturday Fund is employed in accordance with the principles of a provident society. Further, in January, 1892, the Fund was incorporated under the Companies Act of 1862 as an association not for profit. Thus, I take it, the money could be spent as the committee think fit and therefore, if need be, wholly devoted to provident purposes. But if means of medical relief were organised independently of the hospitals in a satisfactory manner—and this has already been done in regard to the providing of trained nurses and the convalescent homes—the hospitals might lose a great deal more than the £10,000. The workmen not only subscribe to the Hospital Saturday Fund but they send subscriptions direct to the various hospitals so as to obtain the tickets they may require for their own use. Thus, for instance, taking an example haphazard, I find that the Birmingham Carriage and Wagon Co., contributed £75 1*s.* 5*d.* to the Hospital Saturday Fund; but they also sent £10 10*s.* direct to the General Hospital, and probably subscribed for tickets from other hospitals. Now, if the workmen were to organise their own medical relief all these sources of income might be withdrawn from the public charities. Though they are not in the least likely to do so, if judged by their present disposition, still it is necessary to reckon with distant, and, as yet, vague possibilities. We must think not only of the policy of an institution such as it is to-day, but also what it may become to-morrow.

With regard to the policy of to-day there are in reality two policies, the practical and the theoretical. The latter, like most theories is quite ideal. The workmen make a free gift every year of £10,000 to the medical charities. Great emphasis is laid on the word "free." They expect nothing in exchange; the £10,000 are bestowed in pure charity. Alderman Cook, chairman of the Hospital Saturday Fund, was interviewed by the *Birmingham Daily Gazette*, and our contemporary, on May 5th last, wrote: "The position of the subscriber to the fund in regard to the medical charities, was some time ago defined in the plainest language in the official organ of the movement, and Alderman Cook, in conversation with our representative, firmly supported the view in regard to this particular matter there set forth—'a subscription to the fund, whether it be weekly or yearly, gives no right whatever. If a man or woman presents himself or herself at a hospital and demands treatment as a right bought by a subscription to the Hospital Saturday Fund, he or she takes up an absolutely unjustifiable position. The subscription carries with it no right; the princely gift of so many thousands per annum carries with it no equivalent. It is a free gift to the free work of the medical charities of the town.'" In a word, the workman gave his pennies, like the rich man gives his pennies, simply and solely for the sake of aiding and succouring the suffering and the afflicted. This is very beautiful, but does it work out exactly on the lines in practice? Every medical man to whom I have spoken testifies, on the contrary, that workmen are constantly expressing their conviction that because they subscribe to the Hospital Saturday Fund therefore they have a right to be treated at the hospitals; and on this ground some have even claimed exemption from the payment of registration fees where these fees are imposed. Then again, now that the workmen are imbued with so high a sense of their social duties that they liberally subscribe to the hospitals, it was only natural to expect that the well-to-do classes, stimulated by this example, would largely increase the amount of their subscriptions. The very reverse is the case. While an immense majority of the working classes subscribe to the hospitals it is only a very small minority of the wealthy classes that contribute. Throughout the country there is a cry that, in face of workmen's subscriptions, the wealthy classes subscribe less. If this statement is not borne out literally by figures it is quite correct if we judge the figures proportionately to the wealth and numbers of the respective classes.

Mr. Smedley pointed out to me that, as a general axiom, we might take it that the subscription list of a hospital only lasts seven years, and therefore the number of new subscribers added to the list every year must be in the proportion of one-seventh to the total. But he complained that when the workmen began to subscribe, the committees of the hospitals became neglectful. Not only have the hospitals been negligent in respect to the wealthy classes, but they have been competing with the Hospital Saturday Fund by urging the workmen to subscribe directly to the hospitals instead of sending their money to the Hospital Saturday Fund, and offering to supply them with tickets as an inducement. On the other hand, one of the leading hospital surgeons complained to me that the Hospital Saturday Fund had reduced the direct subscriptions from the factories to the hospitals. They tried to get the money paid into the general Hospital Saturday Fund, under the promise that the managers of the Fund would see that the men got all the attention they required. The free gift of £10,000 was not altogether a free gift. The Hospital Saturday Fund issued letters of their own recommending patients, and no hospital could, under the circumstances, venture to slight such a recommendation. It was his opinion that the Hospital Saturday Fund fostered the idea that the hospitals were provident clubs. This the medical staff would never tolerate and he thought that, in the long run, the workman would withdraw their subscriptions and utilise them exclusively for their own purposes. As tending somewhat to confirm the opinions thus expressed, I may quote a passage from the organ of the Hospital Saturday Fund published in the issue of February 1895: "To a greater or less degree we believe every one of the Birmingham Medical Charities has recognised the provident principle. Bodies of workpeople—or in fact anyone—may subscribe a guinea to the General Hospital and receive six letters of recommendation. Once subscribers, they may purchase additional tickets at the rate of three shillings and sixpence each. A subscription of one guinea a year to the General Dispensary purchases eight tickets, and the minor ticket hospitals all sell the right of admission or treatment on similar terms. The working classes have been shrewd enough to avail themselves largely of the advantages thus afforded to them. The machinery of the Hospital Saturday weekly collection has afforded them facilities for the collection of their subscriptions by weekly instalments. The result is that nearly £6000 of direct subscriptions of the institutions is derived from this source annually, for which the fund gets no credit."

If to these £6000, direct subscriptions, be added the registration fees, and the £10,000 free gift, it is estimated that the working classes of Birmingham pay at least half the total annual cost, some £45,000, of the hospitals. Since 1873, when the Hospital Saturday Fund was first established, the wealth of the city is stated to have doubled, and it is absolutely certain that the subscriptions of the wealthy classes have shown no proportionate increase. In comparison they have, on the contrary, decreased, and it

is the subscriptions of the working men that have more than filled up the gap But will the working men be content to continue to fill up the gap which the indifference of the wealthy creates. This is highly improbable. Why should the poorest sections of society show themselves more charitable than the wealthy? It may be said that hospitals are for the benefit of the working classes; but they exist, also, and equally, for the benefit of the wealthy classes. It is not only the duty of the rich to subscribe, but, in their own interests, they should do all they can to develop the highest possible skill among medical men. But for the hospitals this knowledge and skill would soon fall to such a low level that the wealthy classes would have to send abroad for surgeons and physicians, and this would cost far more than what they actually subscribe to the hospitals. The workmen are not going to provide with their pence schools of medicine for the benefit of the rich. Mr. Smedley, who as a middle-class man might take a more moderate view of the situation, wrote and circulated among the subscribers to the Hospital Saturday Fund the following threatening words, and this so far back as 1893:—

"Let us regard the position of the classes for whose sole benefit the hospitals are supposed to exist from one other point of view. Assume that they established a vast hospital and dispensary of their own and applied the sum of upwards of £20,000, which they now annually pay over to the charities, to its maintenance. Without much trouble they could increase this sum to £30,000 per annum, an amount nearly equal to the expenditure of the General, the Queen's, and the Dispensary. Assume that they had a stipendary medical staff, and refused the admission of students to their institution. The result would be disastrous to the present medical charities. No longer would the rising men in the medical profession compete for the honorary offices, for the experience which is to make their reputation, and consequently their fortunes, could no longer be obtained there. Hospitals without patients, or with only a few patients, would have no attractions for clever young medicos. The fact is that a large number of patients are essential to a successful hospital. The hospital managers and staffs cater for the multitude, so that their institutions may take high rank and their honorary officers and students may gain the widest experience possible."

This, of course, is but a threat. There is at present no proposal, no desire, to carry out such a scheme. But a big step in this direction is advocated. Again this is Mr. Smedley's suggestion. This gentleman, contrary to the opinion of the majority of the medical profession, does not recognise that there is any serious abuse of the hospitals in the sense of their being frequented by numerous patients who could well afford to pay private practitioners. On the other hand, and in harmony with the unanimous opinion of the profession, he does appreciate the very great abuse due to the overcrowding of the out-patient departments by trivial cases. He therefore proposes as a remedy the creation of provident dispensaries in connexion with the hospitals, and, where possible, on the same premises. These dispensaries should be open from 9 A.M. to 9 P.M., which would be an enormous boon to all patients. They should be in charge of well paid and thoroughly capable and experienced medical men. All recommendations, tickets, &c., to the hospitals, should admit, in the first instance, only to the dispensaries, and give a right to three weeks' treatment. The out-patient departments of the hospitals would be restricted solely to patients coming from the dispensaries for a second opinion. The dispensaries would serve as filters so that the hospitals would have to deal solely with cases where superior skill was necessary. These, I take it, would be treated on the basis of charity, whereas payment would be exacted for all, or nearly all, the dispensary patients. Each ticket to the dispensaries would represent a payment made either by the patient or those who gave him the ticket. For those who could not obtain tickets through the factories having a Hospital Saturday Fund the provident societies, mothers' meetings, &c., could get them from the permanent relief committees, which might give them gratuitously after due inquiry. This, I take it, would mean that all subscribers to the Hospital Saturday Fund would consider that they had paid, and paid to the full, for any medical treatment they might receive at the dispensaries, and would only become objects of charity if their case was so serious as to necessitate their transference from the dispensary to a hospital. But in this scheme I can find no indication as to what is to prevent the abuse of the dispensaries by the well-to-do. It seems to be forgotten that the trivial cases are not only an abuse because they crowd the out-patient departments, but, above all, they are an abuse because, being trivial cases, the patients could in most instances afford to consult a general practitioner. So far as the question of hospital abuse is concerned this scheme only attempts to meet a part of the difficulty. Nor does it give a satisfactory answer to the working men when they ask why they should subscribe so much to the hospitals while the wealthy classes subscribe so little.

Then there is the very important and threatening fact that the workmen's subscription is not a voluntary subscription. According to the letter of the law it is a voluntary subscription, but, as a matter of fact, the pressure exercised is so strong that it is well-nigh impossible to avoid making these payments. If it be true that seventy-five per cent. of the working and poorer classes contribute, they will never rest satisfied till they have by persuasive or coercive means compelled the remainder also to subscribe. Then if all the poorer classes pay, what argument can possibly be adduced for excepting the well-to-do classes from payment; yet at present, the majority of the wealthy classes do not give at all to the hospitals. As there is no machinery, such as that organised by the Hospital Saturday Fund, to coerce, by social pressure, persons in a good position and make them all subscribe, the workmen will surely, sooner or later, demand that a hospital tax be imposed by law. Thus it is that the Hospital Saturday Fund may ultimately prove to be the foundation of a movement that will lead to the municipalisation of the hospitals. It would be foolish to ignore so obvious a deduction. Of course it will be said that this is socialism, and so it is. But when Mr. Smedley, in the speech quoted above, taught each individual working-man that the convalescent homes were none the less his property because others shared them with him, and that only the selfish man valued what he had—namely, his private property—because others could not enjoy it, was he not teaching, both in practice and in theory, the doctrine of collectivism. What is there surprising, therefore, that such teaching and such organisation should lead to the socialistic solution of the problem—namely, the municipalisation or nationalisation of the hospitals? Under such circumstances, and considering the immense influence which Mr. Smedley exercises, and the fact that the hospitals are at the mercy of the Hospital Saturday Fund which he in a great measure governs, it seemed to me indispensable to describe the situation. This I have attempted to do historically and impartially. While expressing my opinion on some minor matters of fact, I have not sought or intended to express any views of my own on the fundamental principles at issue, nor have I attempted or desired to advocate any particular cause other than the necessity of forming a medical union, so that the members of the profession may be in a position to deal with these grave problems.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Faculty of Physicians and Surgeons, Glasgow.

THE following gentlemen, having passed the necessary examinations and having been elected by ballot, have been admitted to the Fellowship of the Faculty: George Henry Edington, M.D. Glasg.; William Robert Jack, M.D., B.Sc. Glasg.; and Thomas Spence Meighan, M.D. Glasg.

Western Infirmary, Glasgow.

It is understood that Dr. Gavin P. Tennent, in consequence of the pressure of other professional duties, has requested the directors to relieve him of his responsibilities as one of the physicians to the infirmary. No official intimation of the vacancy has yet appeared, and unless rumour is strangely at fault there may possibly be such a rearrangement of the allotment of the wards as to obviate the necessity for the appointment of another physician.

Glasgow Corporation.

The sewage disposal committee of the Town Council have decided to give formal notice of the intention of the Council to promote a Bill in Parliament authorising them to deal with the sewage on the south side of the river. This is

another step towards the attainment of that long-desired end—the purification of the Clyde.

Dundee Infirmary.

The directors of the Dundee Infirmary have reduced the list of applicants for the position of medical superintendent to a short list of five, and a definite appointment may be shortly expected. The retiring superintendent, Dr. Nathan Raw, has been elected to a corresponding position in the Mill-road Infirmary, Liverpool. His work at Dundee has secured the warm recognition of the hospital authorities.

Sept. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Beri-beri at the Richmond Asylum.

AT the last fortnightly meeting of the governors of the Richmond Lunatic Asylum the medical superintendent, Mr. Conolly Norman, stated that the beri-beri disease seemed to be declining in violence. His report, however, showed that since the last meeting of the board there had been five fresh cases, while two deaths had occurred, the disease having been complicated in one instance with dysentery and in the other with tuberculosis. The total number of patients attacked since June is 199—namely, 149 females and 44 males, with 4 nurses and 2 attendants. It is satisfactory to note that 172 of the former inmates of the Richmond Asylum have been removed to Portrane, and that it is hoped that 100 more may be accommodated there before the date of the next board meeting. Grangegorman female prison is, moreover, being altered and furnished for the reception of a further number of non-infected patients.

The Sanitation of Clontarf Township.

At the last meeting of the Clontarf Township Commissioners Lord Ardilaun, who occupied the chair, made some interesting observations in reference to the drainage and sanitation of that rising suburban district. The Dublin main drainage is now almost completed as regards the north banks of the River Liffey and the northern portion of the city. This is certain to improve the sanitary condition of Clontarf, the sewers from which now discharge into the northern main drain of Dublin. Lord Ardilaun stated that the Commissioners were at last in a position to borrow money with the object of further improving the drainage of their township and with a view to the ultimate reclamation of the slob lands at Fairview, which were of such injury not so much to the health as to the appearance of the district.

Lunacy in Ireland.

From the forty-sixth report of the Inspectors of Lunatics in Ireland, just issued, I find that although the population of this country is decreasing the number of lunatics is becoming greater, as on Jan. 1st there were 18,966 insane in Ireland, being an increase of 609 as compared with 1896. This increase has been steadily growing and is put down since 1880 at 5984. The average annual admissions for the years 1881 to 1890 amounted to 2792, and for the six years 1891 to 1896 to 3195. This increase in the number of admissions to public asylums has occurred throughout the country without distinction of district, in the prosperous city of Belfast equally with the impoverished localities, and is apparently still going on, for at the last meeting of the Londonderry Asylums Board, on Sept. 9th, the medical superintendent reported an increase of 25 inmates as compared with the same month last year, and he was granted an increase in the number of attendants. It surely demands some explanation. What is the cause of the increase of lunacy in Ireland?

Death of Mr. Hugh McHarry, L.R.C.P. & S. Edin.

I regret to announce the death of a well-known practitioner in Belfast, Mr. Hugh McHarry, which took place at his residence, Grosvenor Lodge, on Sept. 11th. Mr. McHarry had been for some time in failing health, but his end was hastened by an attack of influenza a few months ago. He had been in practice for about twenty-six years, and for a time was a dispensary medical officer. He was medical officer to the Royal Irish Constabulary at Anderstown. He was most popular with his patients.

The Royal Victoria Hospital, Belfast.

As previously announced in THE LANCET, the Belfast Corporation have signified their intention of granting six acres of the asylum grounds in Grosvenor-street, with an additional grant of four acres if all the patients are removed from the asylum, as a site for the Victoria Hospital. The ground, which will form an excellent site, is the exclusive property of the corporation, but in order to make the grant valid it is necessary to have the consent of the board of governors of the asylum. Accordingly, on Sept. 13th, at the usual monthly meeting of the Asylums Committee, a deputation from the supporters of the new Belfast Hospital appeared before them asking them to consent to the arrangement made by the City Council. After hearing the deputation a resolution was unanimously passed granting the request expressed by this deputation and furthering the object as far as possible. Previously to the motion being passed the Roman Catholic Bishop (a governor of the Asylums Board) said before he consented he would request the Corporation to provide a free site for the hospital (the Mater Infirmorum) which he was engaged building. He thought distributive justice demanded that the Belfast Council should treat their people (the Roman Catholics) in the same way as they had treated the Victoria Hospital. The chairman (Professor Cuming) said he thought there would be a great difficulty in giving a free site to the Mater Infirmorum Hospital, because it was obvious that it was in a great measure built, and could not be transferred to another site. Before the site can be acquired by the Victoria Hospital Committee it will be necessary to have a special Bill passed in Parliament authorising the City Corporation to grant the ground. This cannot be done before next session.

Sept. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Etiology of Drinkers' Cirrhosis.

M. LANCEREAUX, who has made for himself a great reputation by his researches upon alcoholism, recently laid before the Academy of Medicine some important observations with regard to the true cause of the cirrhosis which affects drinkers. From a total of 210 personal observations he has come to the conclusion that in Paris the principal cause of cirrhosis is wine. That in general use is the red wine. Those addicted to the use of spirits (*Valcool*) simply are rarely affected with cirrhosis; therefore alcohol cannot be assigned as the cause of cirrhosis in wine-drinkers. M. Lancereaux considers the potassium salts to be in fault, and has made certain experiments upon animals in this direction. He found that on administering potassium salts to animals they died after about from fifteen to eighteen months, and in a large proportion of them he found a cirrhosis "bi-veineuse." Another set of experiments proved that the abuse of alcohol brings on a fatty degeneration of the hepatic cells followed by a fatty cirrhosis. M. Lancereaux accordingly has come to the following conclusion—that wine, and especially plastered wine, is the cause of atrophic cirrhosis, and it would therefore be as well to prohibit the plastering and sulphating of wines.

Intestinal Lavage in Digestive Intoxications.

At the same meeting of the Academy of Medicine M. Clozier, of Beauvais, read a number of observations showing the efficacy of intestinal lavage with a quantity of fluid which is allowed to escape immediately afterwards. The fluid employed is water which has been boiled, used pure or somewhat saline, or containing salol. The injection must reach as high as possible so as to affect the more microbes. By this method the intestinal intoxication is weakened from day to day, the temperature becomes regular, and the general condition improves. M. Clozier has observed various typhoid conditions improve greatly under this treatment, and even eclampsia undergoes a favourable modification under the influence of lavage by simple boiled water.

Incontinence of Urine in Relation to Infantile Hysteria.

At the recent Congress of Neurologists M. Cullere, of Roche sur Yon, presented the following thesis: that urinary incontinence is a sign of a disturbed mental balance. In his eyes it is a manifestation of hysteria, and always develops in a soil duly prepared by heredity. Among the parents of children who suffer from incontinence

are found diverse manifestations of hysteria, incontinence itself, alcoholism, various forms of neuropathy, and, to a less degree, sundry psychoses. Infantile or young hysterics are frequently descended from parents of unstable mental equilibrium or those who are degenerate, and those affected with urinary incontinence are notably like the hysterical in their mental instability and their extreme "suggestibility." Among occasional causes of incontinence M. Cullere reckons, as in hysteria, vivid emotional disturbances, traumatism, and infectious diseases, especially measles. Finally, the diagnosis of hysteria in incontinent children is justified by the existence in a number of cases of other symptoms of this neurosis.

Pathogenic Microbes in Vegetables and Market Garden Produce.

M. Brandeis, of Bayonne, has just called the attention of hygienists to the dangers which accrue to public health from the practice of using human manure for watering market garden produce which is so frequently eaten raw. M. G. Roux has laid before the Society of Medicine of Lyons a communication on the same subject, wherein he draws attention to the resisting powers of certain microbes deposited on vegetables and the extreme difficulty of removing them by repeated washings. M. Guiraud, of Toulouse, has also recounted his experiences as to the produce of the market gardens around Toulouse, where human manure is used. An outbreak of typhoid fever occurred some months ago at Toulouse, and M. Guiraud set himself to search for the bacillus of Eberth and the bacterium coli commune, but, less fortunate than M. Brandeis, M. Guiraud has not been able to isolate the bacillus typhosus. He frequently found "para typhoid bacilli"—i.e., bacilli closely resembling that of typhoid fever, which cause lactose to ferment feebly and redden litmus only after many days; others would not coagulate milk and grew very sparingly upon potato; but he never came across colonies presenting the undeniable characters of Eberth's bacillus. On the other hand, in sixteen samples gathered haphazard, such as materials for salads, strawberries, and the like, in nine he was able to establish the presence of large quantities of the bacterium coli with all its characteristic reactions. With three of these cultivations M. Guiraud made intra-peritoneal injections of 2 c.c. respectively into three guinea-pigs. All were very ill, and one died forty-eight hours after the injection. A post-mortem examination showed a sero-fibrinous exudation on the peritoneum, obvious peritonitis, and acute congestion of the intestines, the lungs, and the kidneys.

Army Medical Reserve.

An important decree has been issued relative to the medical officers of the reserve and of the territorial army. Medical officers of the reserve must be either retired military surgeons who seek appointments in the reserve, or civilian medical men who have graduated as M.D. at a French faculty, and who are available for duty with the army on active service. Retired military and naval surgeons may be appointed to the reserve with the rank which they held when on active service. Civilian medical men can on their first joining the reserve only hold the rank of assistant-surgeon-major (*médecin aide-major*) of the second-class. Their fitness for this position is ascertained by a special examination the subjects of which are prescribed by a Ministerial regulation; they are admitted to this examination as students when they have completed the class attendance required by the Minister of War. The regulations with respect to promotion are as follows: Civilian medical men appointed to the reserve cannot in time of peace rise to a higher rank than surgeon-major (*médecin-major*) of the second-class, and that only after having passed a special examination the subjects of which are sanctioned by the Minister of War and are such as to test the officer's knowledge of administrative work and of the military aspect of his duties. Ex-military surgeons can rise by promotion in the reserve to the rank of surgeon-major of the first-class. The minimum period of service necessary for rising from any rank to the step immediately above it is fixed at four years in the case of assistant-surgeon-majors of the second-class, and at six years in the case of assistant surgeon-majors of the first-class or surgeon-majors of the second-class. At the same time, the length of service required for promotion to the rank of assistant surgeon-major of the first-class is reduced to two years in the case of officers of the reserve who are filling, or who have filled, the position of professor or assistant professor in the faculties of medicine; of hospital physician, surgeon, or obstetric physician in the cities where these appointments are awarded by competition; of *chef de clinique* or prosector appointed by competition in the faculties or schools of medicine; or of resident medical officer of a hospital appointed by competition in cities which possess a faculty of medicine or a combined faculty of medicine and pharmacy.

Sept. 14th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Marcello Malpighi.

ENGLAND should certainly have been represented at the unveiling of the monument to the great Italian physician and biologist on Wednesday, Sept. 8th, for it was from England that he won recognition and honour when in his native Italy he had to go into hiding to escape imprisonment or worse. If, however, she had no representative on the occasion, amends were made to her for the omission by nearly every orator who spoke—by none more than by Professor Todaro, who holds the Chair of Anatomy in our medical school, and whose brilliant discourse was almost as much an eulogium of the Royal Society of London as of the mighty nature-student it sought to commemorate. But I am anticipating. For many years a movement has been on foot to erect to Marcello Malpighi a monument at his native Crevalcore, the little Emilian town which but for him would only be remembered as the scene of the encounter between Marc Antony and the Consul Pansa. On Wednesday, the 8th inst., that movement issued in a conspicuous success, the monument itself being a *chef d'œuvre* of the sculptor, Enrico Barberi, and the ceremony of its unveiling having attracted as distinguished an assemblage of Italian "leaders and luminaries" in medicine and biology as the kingdom is at this season capable of mustering. The day was all that could be desired, and as the veil fell from the grand impressive figure—represented sitting, book in hand, in profound meditation—the glorious sunshine seemed to exult in lighting up the features of the "sworn enemy of obscurantism," and in reminding the spectators of the darkness through which that figure had led the way towards "the ampler ether, the diviner air" in which modern science lives and moves. Born of farmer parents on March 10th, 1628, young Malpighi, early left an orphan, matriculated at Bologna, and soon distinguished himself in literature, philosophy, and finally in the medical school. The controversy between the moribund Aristotelianism and the Galilean induction had not yet resulted in the decisive defeat of the former, which had still strength enough to make its sting felt by young aspirants like Malpighi to university preferment. In fact, after graduating in 1653, he had to flee from his Alma Mater and take refuge at Pisa in the Chair of the Theory of Medicine created for him by the Tuscan Grand Duke Ferdinand II., where, once left with a free hand to experiment and a free voice to teach, he made his influence felt for good far beyond the limits of his subject and the precincts of his school. From 1656 to 1659 he fought the battle of inductive research, converting his colleagues from "Galenism" and maturing those studies which were afterwards to fructify in nearly every walk of medicine. So assiduous and laborious was his life that, combined with the local malaria, it impaired his strength for a season, and he had to return as a private individual to his Bolognese Alma Mater. He had by this time, however, shown what he was capable of, and after, when, in 1660, making the first application of the microscope to anatomy, he became, as Virchow has shown him to be, the founder of modern histology and the virtual anticipator of Schleiden and Schwann in referring the fundamental tissue of every living organism to the parent "cellula." Not only so, but (in Virchow's own words) "by discovering the capillary current through which the blood passes from the arteries to the veins he succeeded in filling up the chasm (no small one) left in the physiology of Harvey, his illustrious predecessor, and in convincing the world of science that the 'circulation of the blood' was an irrefragable fact. He thereby laid the secure lines on which his successors have reared the edifice of modern physiology and pathology; nay, more, his acute intellect penetrated so far as to discover the elements on which rests the theory of the composition of the blood." This testimony of the great Berlin pathologist was supplemented, at the ceremony of Wednesday

last, by that of Kölliker, of Wurzburg, who called him "the founder of embryology"; while Haeckel was also quoted to the effect that "in Malpighi we can trace the predecessor of Darwin in the theory of natural selection." Work the significance of which it has taken two centuries to appraise had even then brought him recognition in his native Italy, and we find him in 1662 Professor of Anatomy and Medicine in the University of Messina. But the Sicilian seat of learning was too obscurantist for so professed a votary of Hippocrates and nature study, and his life there was clouded and saddened by priestly and even academic persecution, denouncing him for his vivisection and his post-mortem examinations, and finally assuming so menacing an attitude that he had (as already stated) to go into hiding at Corticella. Still, even in enforced concealment he worshipped Nature, as the early Christians worshipped God in the Catacombs, and to this period we owe his researches on nearly every organ in the human frame, to say nothing of "comparative" work in the anatomy of the eagle, of the sword-fish, of the thunny, of the torpedo, of the glow-worm, and of intestinal worms in man and brute alike. In 1666 came forth his classic work, "De Viscerum Structurâ," whereupon the Royal Society of London begged him to give it a compendium of his findings. He sent it by way of answer his magnificent "Epistola de Glandulis Conglobatis." From this date more than friendly relations subsisted between him and the great English association. It placed his bust side by side with that of Newton in its great hall, and at its instance he was induced to publish his masterpiece, "De Bombyce" (on the silkworm). Of this treatise it will suffice to say that two centuries have only enhanced the admiration that hailed its first appearance, and that not only experts in the subject such as Reaumier, Cornalia, and Maillet accept it still as a classic, but that in 1878, during the French International Exposition in Paris, when the International Congress held its sittings, the Government of the Republic reprinted the treatise at its own expense and presented a copy to each member of the congress then present. Once more from London came the earliest and most cordial appreciation of his work "De Anatome Plantarum" which so fascinated Cuvier more than a century later for its demonstration of the respiratory function in vegetable organisms. English attestation of his signal merits had now a contagious effect on his compatriots and we find the enlightened Pope Innocent XII. rebuking the superstition of his order and appointing Malpighi his body-physician and "archiatro" (chief consultant) at the Pontifical Court. Here the much-tried nature student found rest at last, pursuing his researches under every facility papal munificence could provide and rectifying the frontiers of science in every direction till, after four years' tranquil activity, he succumbed to a stroke of apoplexy in 1694. His own pupil, whom Italians delight to rank with Sydenham as the "Hippocrates of Italy"—that great practitioner being honoured as the "Hippocrates of England"—tended him to the last, and by special request made a post-mortem examination of his body—a service quite in keeping with the spirit of the master whose researches on malaria prompted him to those further investigations so honourable to Baglivi. So lived, so died Marcello Malpighi, and if he has had to wait for due recognition, even for a monument in his native town, till the close of the nineteenth century, that only attests his genius and its triumphs the more, as proving how far he outsoared his contemporaries, and how truly it was said of him on Wednesday last that "being dead he yet speaketh." As to the ceremony solemnised on that day I have no space to dwell on its merely picturesque or purely rhetorical incidents. Be it enough to say that sculptor, speakers, and audience were all worthy of the occasion, and that with due official honour Italy received another accession to her "silent population of marble"—"silent," yes, but whose presence is eloquent of her mighty past and fraught with lessons she will do well to re-learn.

Sept. 11th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Insanity in Prisons due to Idleness.

THE labour unions have so influenced legislation that the industries hitherto carried on in the prisons have been greatly curtailed. The result has proved most disastrous to the health of the inmates. Insanity is the predominant disease, and so frequent has that become in some prisons that the prisoners have been set to work at tasks devised for the purpose, and with marked relief. In New York the prisoners have been allowed to make articles for use in the charitable institutions of the State, but no prison-manufactured article can be sold in the markets. This policy has diminished the former prison industries, but there is still enough to do to partially employ the prisoners.

Medical Inspection of Public Schools.

I have noticed the inauguration of medical inspection of the children of the schools by the Board of Health. The quarterly report of the work done has been published which shows the different kinds of diseases which may affect children who are mingling with healthy children. Parasitic diseases lead in the list, being 2627 in number. Of contagious diseases of the eye there were over 700 cases; of skin diseases there were 175; of diphtheria, 91; of measles, 51; of scarlet fever, 20; of mumps, 117; of chicken-pox, 93. Though the propriety of the inspections were at first regarded as very doubtful, yet the results prove its great importance. In Chicago a similar inspection has been in progress for a year with the following results: 744 reports of individual cases led to the discovery of 2617 cases in their homes; 231 cases of scarlet fever discovered 745 cases at home; 46 school cases of measles revealed the epidemic prevalence of this disease in several parts of the city. In October impetigo contagiosa became prevalent in seven schools, but was arrested after excluding 107 cases and employing suitable preventive measures.

The Treatment of Sunstroke.

Sunstroke is the most prominent disease of this city during the season of extreme heat. The mortality has generally been excessive. A recent study has been made of the 805 cases treated in the various hospitals in 1896, which gives some interesting results. The ten days, Aug. 4th to Aug. 14th, include the period of the greatest intensity of the conditions causing sunstroke. There was excessive and prolonged high temperature with high humidity. Clinically the cases were divided as follows: (1) heat prostration; (2) the asphyxial form; and (3) the hyperpyrexial form. There were 247 of the first class; the temperature did not exceed 105° F.; all recovered. Of the second form there were 38 cases; they lost consciousness, but the temperature did not exceed 105°; all recovered. Of the third form there were 520 cases with 132 deaths; each one had a temperature of 105° or upward, and but few retained consciousness. The difference between the three classes was one of degree and not of kind. The majority of sunstrokes occurred between 2 and 5 P.M., and between 7 and 10 P.M. The fatal complications were meningitis, pneumonia, and exacerbation of chronic kidney disease. The cause of death in most cases was failure of the respiratory and cardiac centres. In fifteen cases the changes in the nervous system were examined microscopically. All showed more or less changes in the chromophilic plaques of the ganglion cells. These plaques in some cells were changed in shape and were fewer in number; in some they appeared to be broken up or to have entirely disappeared. In three cases referred to there was universal exhibition of acute parenchymatous degeneration of the neurons of the whole neural axis. In the brain cortex and in the cerebellum the cells showed the same stages of degeneration. The spinal-cord cells were apparently not so extensively involved. These facts prove that there is a toxic cytolysis in isolation, or cell resolution of the neurons, which depended upon the condition of the body forces, the eliminative capacity of the body, and the duration of the poison. The treatment of the first class of cases was the same in the different hospitals—namely, rest in bed, cool sponge bath, an ice cap, and phenacetine for the headache. In the second class, or asphyxial cases, tub baths were given at 60° F., or sponge baths, or if coma and nervous symptoms required it the patients were put for a few minutes into the ice bath. In the third, or hyperpyrexial cases, hydrotherapy was employed in some form in all cases. It differed in application and in the temperature of the water. The records of mortality in the different hospitals furnish a fair estimate of the efficacy of the methods employed. The mortality among the patients treated with ice baths, and the bath continued until the temperature had fallen to about 103° or 102° F., varied in the different hospitals from 18 to 27·5 per cent. When in some cases the ice pack was used instead of the ice bath the mortality was 25·5 per cent. When the ice-

bath was given for ten minutes, irrespectively of the point to which the temperature fell so long as it remained above a safe limit, the mortality was 40 per cent. Among patients treated with the bath at from 50° to 75° F. the mortality was one-third. When the baths were given at 90° to 110° F., and reduced in about fifteen or twenty minutes to 72° F., the results did not seem so favourable as with the cold baths. Among the patients treated with a needle spray from a hose attached to the cold water faucet the mortality was 11·5 per cent. Cold packs followed by hot packs in 197 pyrexial cases gave a death-rate of only 5 per cent., or, counting 8 patients who died a week later, the mortality was but 9·13 per cent. The death-rate of sunstroke, as given in Quain's Dictionary of Medicine, is from 41 to 50 per cent. In the entire number of cases of hyperpyrexia as recorded in the paper under consideration (540) the death-rate was 25·38 per cent. Therefore the treatment employed in the various city hospitals has given very satisfactory results. Briefly, the best treatment seemed to be a needle spray, or ice bath, or cold pack, till the temperature fell to 103° or 104° F., followed immediately by a hot pack, with stimulants and sedatives as the physician's judgment might deem necessary.

Aug. 19th.

Obituary.

JAMES MUTER TURNBULL, M.D. EDIN., F.R.C.P. LOND.

DR. TURNBULL graduated in 1839 and went to Liverpool shortly afterwards, when the town was extending rapidly north, south, and east, while the population was increasing enormously. He was elected physician to the Northern Hospital shortly after its erection, and to the Royal Infirmary some years later. He was also physician to H.M. Customs, to the Queen's, the Scottish Widows', and other life assurance societies. He had for many years a considerable consulting practice, being shrewd, observant, and very painstaking, having beneath a somewhat caustic manner a really kind heart. In 1876 he was elected President of the Liverpool Medical Institution, and on resigning his office as physician to the Royal Infirmary he was elected honorary consulting physician, which office he held at the time of his death. Dr. Turnbull retired from practice fifteen years ago, being a martyr to chronic rheumatism. He went to reside in Tunbridge Wells, where he died at the Spa on the 7th inst. in his eightieth year. In 1870 he married Miss Maxwell, daughter of a late well-known and highly respected Liverpool merchant. His funeral took place on the 9th inst. at Rusthall Churchyard, Tunbridge Wells.

A PROJECTED PUBLIC HOT WATER SUPPLY.—An interesting demonstration was held at the Crystal Palace last Wednesday of a new and ingenious process of obtaining hot water. The apparatus is so designed as to place within the reach of everybody a gallon of hot water for one halfpenny. The source of heat is the ordinary street gas lamp. Over the flame, at a distance to prevent interference with complete combustion, is placed a coil in which steam is generated. By its own tension this steam is driven under some pressure to the foot of the lamp in which is contained a reservoir of water connected with the main in the ordinary way. By a mechanical contrivance so familiar to everybody now, the hot water may be drawn off by placing a halfpenny in a slot. There is little doubt, we think, of a great future for this invention, as it obviously presents an important bearing upon domestic, dietetic, and hygienic questions. It is a curious fact that no one has hitherto thought of utilising the enormous quantity of heat that is dissipated from the street gas lamps. Some estimate of this quantity may be derived from the fact that over a quarter of a million sterling annually is spent upon street lighting. The light, however, is utilised, but the heat in the majority of cases is wasted. This novel enterprise is being undertaken by the "Pluto Hot Water Syndicate, Limited," 52, Queen Victoria-street, E.C. The departure has so many interesting features in relation to domestic economy and comfort, chiefly in connexion with its application to the rapid and economical preparation of hot food and beverages, as of beef-tea or cocoa, that we propose to return to the subject at greater length in a future number.

THE

BRITISH MEDICAL ASSOCIATION.

MEETING AT MONTREAL.

THE sixty-fifth annual meeting of the British Medical Association was opened at Montreal on Tuesday, August 31st, under the presidency of Dr. T. G. Roddick, Professor of Surgery in McGill University.

The occasion was an interesting one, as this was the first time that a meeting of the Association had ever been held outside the British Islands. The choice of Montreal for the departure was considered on all sides to be a very happy one. As the chief city in the senior colony of the Empire Montreal had paramount claims upon the consideration of the British Medical Association, while the beautiful and beautifully situated city has always been famous for its kindness and hospitality to visitors. Montreal also possesses spacious public buildings and all other facilities for the accommodation of a large crowd, while the noble hospitals well repay the thorough investigation that a medical congress was sure to bestow upon them.

The dinner given by Dr. Roddick at St. James's Club on Monday evening to the officers of the Association and a large number of guests formed a pleasant prelude to the hospitalities of the week. Amongst the company were the Earl of Aberdeen, the Governor-General of Canada, Sir Adolphe Chapleau, the Lieutenant-Governor of the Province of Quebec, Lord Strathcona and Mount Royal (to give the sonorous title under which Sir Donald Smith, the eminent colonial politician, is now concealed), Sir William Hingston, Sir William Van Horne, and the Mayor of Montreal, Mr. Wilson Smith. The proceedings were of a thoroughly enthusiastic order; in particular, the toast of the health of Lord Strathcona met with a great reception; for Montreal, mindful of Sir Donald Smith's munificence to the city, has warmly welcomed his elevation to the British House of Lords.

The programme of the proceedings was definitely commenced on August 31st at noon, when the Bishop of Niagara gave an address at the opening service, which was held in the English cathedral. The Bishop of Niagara is better known to Canadians as Dr. Dumoulin, and occupied the pulpit at St. James's Cathedral, Toronto, for many years, where he earned for himself the reputation of being one of the most eloquent preachers in the Dominion, a reputation which those who heard him on this occasion can well understand to have been merited.

On Tuesday afternoon the first or adjourned general meeting was held, at which Dr. Roddick delivered his presidential address to a large and appreciative audience.

On the evening of the same day the Earl of Aberdeen held a reception at Laval University, when the guests had the privilege of hearing an address by Professor Charles Richet, the official delegate of the French Government, and Professor of Physiology in the University of Paris. The subject of Professor Richet's address was the Work of Pasteur and the Modern Conception of Medicine, and his address was designed to show that the union of medicine and science is indisputable, although absolute scientific methods may be out of place by the bedside, and can at any rate never take the place of observation, sympathy, and tact. "If I were ill," concluded Professor Richet, "I would not seek the aid of a chemist or of a physiologist, and medicine is not to be learned from the books of Claude Bernard or of

Pasteur. Clinical instruction is necessary, such as long observation of patients alone can furnish. Prophylaxis, diagnosis, prognosis, therapeutics, are not to be learned in scientific books. Something else is necessary—observation, long, patient observation, the old Hippocratic observation, without which there can be no good physician. Young students must be guided in the examination of patients by experienced practitioners, and no one, I presume, would be guilty of the folly of proposing to replace the clinical ward by the laboratory. But without laboratories the clinical department must remain incapable of scientific advance, and this condition of stasis is assuredly undesirable. For in spite of all the progress which has been made, much yet remains to be done. Are not tuberculosis and cancer, for example, the disgrace of medicine? I appeal to all medical men here present. Is there any one of you, gentlemen, who in the presence of such painful modes of death does not feel himself humiliated to the bottom of his soul by his powerlessness?"

On Tuesday evening, also, at the Windsor Hotel, a banquet was given to Lord Lister by the members of the Montreal Medico-Chirurgical Society, the President of the society, Dr. George Williams, occupying the chair. After dinner an address was presented to Lord Lister congratulating him "on having been selected by the best Sovereign that ever graced a throne for the high distinction of a peerage." The address concluded with the following testimony to the estimate in which Lord Lister is held in Canada: "In advancing scientific and practical surgery you have advanced every branch of the healing art, and by investigations which have led you to the detection of the causes of disease you have brought us to a knowledge of the hindrances to the healing process. Henceforth present and future generations may point to your lordship with pride as the man who brought relief from suffering into every quarter of the globe. May your years be many, and may they be filled to repletion with the happiness which is born of having done nobly and well."

On Wednesday morning the work began in the various sections by the delivery of the addresses of the presidents of the sections. In the afternoon the second general meeting was held, after which the interesting function was witnessed of the presentation of the honorary LL.D. degree of McGill University to ten distinguished members of the Association and to one delegate. The delegate was Professor Richet, concerning whom the Dean of the Medical Faculty, Dr. Craik, made the following amiable little speech in presenting him to the Chancellor of the University, Lord Strathcona:—

"M. Charles Richet, Professor of Physiology in the University of Paris, official delegate to this meeting from the Government of the French Republic and from the University of Paris; a man who has made his mark in very many domains; as the pure physiologist in connexion with the working of the heart and of the nervous system; as a pathologist and bacteriologist by his studies along with Hericourt into the subject of serum therapeutics, in which line he was the first to make those studies which nowadays are so widely known in connexion with the treatment of diphtheria and other diseases; in scientific journalism as the editor of one of the greatest French scientific journals, and as a student of psychology, in which, with Crookes, Sidgwick, and other eminent scientists, he has soared into transcendental realms."

Dr. Henry O. Marcy, whose interesting paper on the Advantages of the Absorbable Suture was read to the Surgical Section of the Congress, enjoys the memorable distinction of being Lord Lister's first American pupil, and on his return to America in 1870 he established a laboratory for the study of wound infection, and opened a hospital in order to demonstrate the practical value of antiseptic surgery. In the field of antiseptic surgery in America he was the pioneer, subjected at first to much criticism, but long since recognised as an authority. Surgery is indebted to him, not only for the introduction of buried animal sutures, but for quite a number of special operations, notably the radical cure of hernia in the male by the restoration of the obliquity of the inguinal canal, first rendered possible by the use of buried animal sutures, and published by him in 1871. He opened the discussion upon antiseptic surgery at the International Medical Congress held in London in 1881. Dr. Marcy's paper will be found reported in the proceedings of the Surgical Section.

On Wednesday afternoon a garden-party was held in the grounds of the Royal Victoria Hospital, a noble edifice erected and presented to the city by the two Canadian peers, Lord Mount-Stephen and Lord Strathcona. On the evening of the same day Lord Strathcona held an at home in his splendid house in Dorchester-street, the rooms of which were crowded. The guests were received by Mrs. Howard, in the absence of Lady Strathcona.

On Thursday afternoon Lord Lister laid the foundation-stone of the Jubilee Nurses' Home in connexion with the Montreal General Hospital in the presence of a large assembly. On the same afternoon a large party of the Association were entertained at a luncheon upon "The Mountain" by the Lord Mayor and Aldermen of Montreal. The day was all that could be desired, a fresh breeze tempering the heat of the sun, and the clearness of the atmosphere permitting the visitors to have the full benefit of the famous view.

Among the numerous pleasant hospitalities of the week must be mentioned an afternoon tea and reception at the Art Gallery given by Miss Roddick; garden parties given by Mrs. George Hague, Mrs. J. Ross, and Mrs. S. Greenshields; and a five o'clock tea at which Mrs. S. Finley was the hostess. On Thursday a golf match was played on the links of the Royal Montreal Golf Club at Dixie between Canadian and English medical men, and on Friday a special exhibition game of lacrosse was arranged, the contestants being the Montreal Lacrosse Club, which has many times held the championship of the Dominion, and a team from the Indians of St. Regis. The Royal Montreal Golf Club and the McGill University Cricket and Lawn Tennis Clubs all kindly extended to the members and guests of the Association the privileges of full membership.

The trade exhibits in the Annual Museum were well housed at the Victoria Skating Rink, and if there were not as many representatives of English firms as could have been desired, yet this in a measure was compensated for by the presence of many firms whose wares are not usually seen in this annually recurring exhibition.

A feature of the meeting which was much appreciated by the members was the issue by the Association of a daily journal giving reports of the proceedings of the general meetings and sections. With considerable enterprise the editorial staff of the daily journal published, not only a programme of future events and a *précis* of past ones, but the full text of the various addresses and summaries of the debates which ensued.

The official proceedings of the Congress were brought to a close at the fourth general meeting, which was held on Friday afternoon, when Dr. Hermann M. Biggs, the eminent bacteriologist to the New York City Health Department, delivered the Address in Public Medicine. A long abstract of this address, which was listened to with keen interest, will be found in our report of the meeting. The social proceedings terminated on the evening of the same day with a conversazione held in the grounds of McGill University.

The Montreal meeting of the British Medical Association will be remembered by those who took part in it as one of

the most brilliantly successful of the annual gatherings of the Association. The fact that this is the first occasion during its sixty-five years of existence that a meeting has been held outside the limits of the United Kingdom marks its exceptional character, and the lavish hospitality bestowed upon the British members and American guests by the warm-hearted Canadians will long be remembered.

THE GENERAL MEETINGS.

THE FIRST (ADJOURNED) GENERAL MEETING.

The first general meeting of the Association was held, or rather completed, in the Windsor Hall, Dominion-square, Montreal, on Tuesday, Aug. 31st, at 2.30. P.M., having been adjourned from London, where, it may be remembered, the first part of the meeting took place on Tuesday, July 27th, at Exeter Hall. Among those present on the platform were the Earl of Aberdeen, Lord Lister, and Lord Strathcona.

The chair was in the first instance taken by Dr. ROBERT SAUNDBY, President of the Council of the Association, who had occupied that position at Exeter Hall in the absence of Dr. Roddick, the new President. Dr. Saundby having retired, Dr. Roddick took the chair, and began by introducing to the meeting the Mayor of Montreal, who welcomed the members to the city in an eloquent speech the purport of which was to show that it was right and fitting that the first meeting of the British Medical Association ever held outside the British Isles should be held in the metropolitan city of the Dominion of Canada. His honour concluded by begging "the guests of Montreal, after visiting the country, to tell it abroad that Canada had a vast territory; that its people were loyal to the core; that they lacked population, and wanted people to be sent out to their country—some of the teeming millions which the Association had left at home."

Sir ADOLPHE CHAPLEAU, the Lieutenant-Governor of the Province of Quebec, and the Earl of ABERDEEN having also spoken words of welcome, Dr. J. G. ADAMI, the honorary local secretary of the Association, read the roll of delegates of foreign countries and medical societies, and of the representatives of the various branches of the Association. Certain of these who were present were then formally presented to the Earl of Aberdeen and Dr. Roddick, among them being Professor Charles Richet, the representative of the Faculty of Medicine of Paris, and Dr. O'Donnell, the delegate of the Province of Manitoba. Dr. O'DONNELL being asked by the PRESIDENT to address the meeting gave an invitation to the Association in the name of the Premier of Manitoba to hold an early meeting at Winnipeg, an invitation which will be referred to a meeting of the Council in London.

Dr. RODDICK then delivered his Presidential Address upon Canada in its Medical Aspects, which will be found in THE LANCET of Sept. 4th.

THE SECOND GENERAL MEETING.

The second general meeting was held in the Windsor Hall on Wednesday, Sept. 1st, at 2.30 P.M., the President being in the chair.

Dr. OSLER delivered the Address in Medicine upon British Medicine in Greater Britain, which will be found in full in THE LANCET of Sept. 4th, and upon the proposal of Dr. STEPHEN MACKENZIE, seconded by Dr. JACOBI, a cordial vote of thanks was accorded to him for his eloquent and learned essay.

The meeting was then converted into a Convocation of McGill University for conferring degrees on certain distinguished members of the medical profession, the gentlemen selected for honour being Lord Lister, Professor Richet, Sir William Turner, Professor Michael Foster, Professor Alexander Macalister, Sir Walter Foster, Mr. Christopher Heath, Mr. C. G. Wheelhouse, Dr. W. H. Gaskell, Dr. R. Saundby, the President of the Council of the Association, and Dr. Henry Barnes, the retiring President. These gentlemen were introduced to Lord Strathcona, the Chancellor of McGill University, by Dr. Craik, the Dean of the Medical Faculty of McGill University, in well-chosen terms, and received the degree of LL.D. Lord Lister, Professor Richet, and Professor Michael Foster having spoken briefly in acknowledgment of the great honour done to them, the proceedings closed with the Benediction.

THE THIRD GENERAL MEETING.

The third general meeting was held in the Windsor Hall on Thursday, Sept. 2nd, at 2.30 P.M., when the Address in Surgery upon the Surgeon of Old in War was delivered by Mr. MITCHELL BANKS. An abstract of this address was published in THE LANCET of Sept. 4th.

THE FOURTH (CONCLUDING) GENERAL MEETING.

The fourth general meeting was held in the Windsor Hall on Friday, Sept. 3rd, at 2.30 P.M., when the Address in Public Medicine was delivered by Dr. HERMANN M. BIGGS, Pathologist and Director of the Bacteriological Laboratories, the New York City Health Department. The following is a long abstract of the address, which was entitled:

Preventive Medicine in the City of New York.

After a graceful acknowledgment of the honour he had received by being requested to deliver the address in Public Medicine Dr. Biggs referred to the high position of sanitary science in England, emphasising the fact that she, during the past fifty years, had gone far ahead of every other country in the science of preventive medicine. He referred to the fact that conditions were very different in the United States, for there they had no national Board of Health, and every State did what seemed right to itself; wherefore it followed that there was a great lack of uniformity in regulations, methods, and efficiency. "Instead, therefore," he continued, "of attempting the consideration of the broader subject of public medicine in the United States, I shall confine myself to a discussion of the conditions and methods of sanitary work in New York, as these serve as a type of the best of those found in the greater American cities. The Health Department of New York City is organised under a special Act of the Legislature of New York State and is an entirely independent sanitary organisation, not being subject even to the jurisdiction of the State Board of Health. The Board of Health of the Health Department is composed of four members—namely, the President, who is the chief executive officer; the Commissioner of Health, who must be a physician (these two being appointed by the Mayor of New York City), and two *ex-officio* members—the health officer of the Port of New York (who is a State officer nominated by the Governor), and the President of the Board of Police Commissioners of New York City (the latter being added to bring the Police Department and the Health Department in closer relation to one another). The Commissioner of Health of the Health Board of New York City is *ex-officio* a member of the State Board of Health, as is also the health officer of the Port of New York; so that two of the members of the Municipal Board are also members of the State Board of Health; but the State Board has no jurisdiction in New York City, and the action of the Municipal Board is absolutely independent. The Board of Health of New York City has jurisdiction over the whole of New York City, as it now exists, with its about 2,000,000 of population, and with the beginning of 1898 a similar Board, increased to five members, will have complete jurisdiction over greater New York, with a population of about 3,250,000. All of the administrative and executive work of the department is concentrated at the main offices, and is carried on under the immediate direction of the chiefs of the various divisions into which the department is divided. The Act of the Legislature of New York State creating the department gives to the Board most ample powers, executive, judicial, and legislative in character. The funds for the support of the department are supplied from the general funds of New York City. Before proceeding to a discussion of the management of infectious diseases in New York, I desire to call especial attention to the fact that all matters connected with the scientific investigation, diagnosis, care or sanitary supervision, in every way, of the infectious diseases are regarded by the Board of Health as properly coming within its province. In the development of the methods now in use the proposition expressed has furnished the governing principle. I need hardly point out the great difference between this conception of the functions of a sanitary board and that usually held. The duties of sanitary authorities relating to the infectious diseases are generally regarded as limited to the inspection of reported cases of only a few of the infectious diseases, their removal to hospitals when required, and the subsequent proper disinfection of the premises. In times

of emergency, as in the presence of serious epidemics, more comprehensive and stringent measures are considered justifiable; but it has not generally been regarded as necessary or desirable that municipal sanitary authorities should furnish opportunities for, or assistance in, the diagnosis of infectious diseases, should conduct experimental investigations into their causes, should assist in the treatment in any way of cases outside the hospitals, or otherwise concern themselves with these matters. It has seemed to us in New York City, however, that everything connected with the infectious diseases in every form came properly within the scope of the department's work." Dr. Biggs then went on to describe the founding of the municipal bacteriological laboratory in 1892, an institution originally started to investigate cholera, but which very soon took up the questions of diphtheria and tuberculosis. In 1894 the laboratory began the manufacture of diphtheria antitoxin aided by an annual municipal grant of 830,500, and the laboratory now supplies (1) free supplies of antitoxin to all public institutions in New York City; (2) free supplies to private physicians for the use of persons too poor to pay for the remedy, on condition that a report of the cases treated be forwarded to the Health Department on the completion of the case; and (3) free administration of antitoxin to any resident in the city by a special staff of medical inspectors at the request of the attending physician. Besides this work the laboratory also investigates other infectious diseases, such as glanders, in addition to providing for a supply of glycerinated vaccine lymph. The Health Department also provides for disinfection in the case of any infectious disease, the general procedure being as follows: Every case of contagious disease reported to the department is regularly inspected by the medical inspector assigned to the district in which it occurs. When consent can be obtained such cases are removed to the department hospital, and when necessary the removal to the hospitals is enforced. A comparatively small proportion of the total cases, however, are actually treated in the hospitals for contagious diseases. After completion of the illness, or transfer of the patients, thorough disinfection is performed in the apartment, and all infected materials are removed to the disinfection station for destruction or for disinfection by steam. After treatment they are returned to the owner, no charge being made for the services. Disinfection is compulsory in every case.

Dr. Biggs then proceeded to describe more in detail the methods employed in cases of diphtheria and tuberculosis. With regard to the first he said: "Knowledge of the existence of cases of diphtheria reaches the department, either by a direct report of the case by the attending physician or through the forwarding of a culture to the laboratory for bacteriological examination when the case is of doubtful character. If on examination of the culture the Löffler bacilli are found the case is reported to the Division of Contagious Diseases from the laboratories, at the same time that a report is forwarded to the attending physician. In both instances the cases are immediately referred to the medical inspector connected with the Division of Contagious Diseases assigned to the district in which the case occurred. If the person lives in a tenement house, lodging-house, boarding-house, or hotel, and a culture has not been previously made by the attending physician, the inspector makes in each instance a culture to confirm the diagnosis. The subsequent action of the department depends upon the result of this culture. If diphtheria bacilli are found the case is treated as one of diphtheria; if they are absent the subsequent treatment depends on the special conditions existing. In every instance in which the case is proved to be diphtheria, at the end of ten days a secondary culture is made by the attending physician or the district medical inspector to determine whether the diphtheria bacilli are still present in the throat, and subsequent cultures are made at short intervals until the examinations show that the organisms are no longer present. The case is then referred for disinfection, a detailed statement being left at the house by the medical inspector in charge to guide the disinfectors as to the course which shall be followed. Every case of diphtheria which comes to the knowledge of the department is recorded in a card index according to the number of the house and the street in which it occurs, envelopes being used in place of cards. In each envelope, representing always one case, are placed all of the data relating to the first and subsequent cultures and results; and as each case is recorded it is at the same time plotted on a sectional map of New York City drawn to scale, showing every house lot in the city. This plotting is done by conventional signs, so that it is possible at a glance to determine the grouping and distribution of cases in different parts of the city, the number of cases occurring in any given house in the city during the last four years since this method has been in use, and the date when reported. It is also possible in a moment, by reference to the yearly card index, to find all the information in relation to each case which the department possesses. A special corps of inspectors is assigned to the administration of diphtheria antitoxin, and, on request, one of these inspectors will visit a person suffering from diphtheria in any part of the city, day or night, and administer diphtheria antitoxin under the supervision of the attending physician. When the patients are too poor to have an attending physician the inspectors will supervise their removal to the hospitals. These inspectors are also prepared, at the request of the attending physician, to perform intubation in laryngeal diphtheria. It is the usual course, when antitoxin is administered by an inspector, to immunise all members of the family who have been exposed to the disease. Diphtheria antitoxin has also been largely employed for the immunisation of the inmates of public institutions, especially children, when diphtheria has appeared. This is the ordinary routine, and in every instance during the last two and a half years it has been possible to quickly stamp out diphtheria in institutions by this process of immunisation."

With regard to tuberculosis and the methods adopted by the Health Department for its prevention Dr. Biggs referred to the enormous importance of the subject, how it is universally admitted that tuberculosis is both infectious and communicable, and how neglectful sanitary authorities had been hitherto with regard to it. He continued: "The Health Board of New York City first began an educational campaign in relation to the causation and prevention of pulmonary tuberculosis in 1889. In that year a communication on this subject presented by the writer and the associated consulting pathologists of the department was widely published, and leaflets based on it, giving the essential facts as to the nature of this disease, were freely distributed. No further action was taken at that time, as investigation showed that the medical profession and the public were not then prepared for more extended measures. In December, 1893, the attention of the department was again called to the subject by the writer, and it was determined to at once institute more comprehensive measures for the prevention of this disease. The measures then adopted required the notification of all cases of pulmonary tuberculosis occurring in public institutions, and requested reports of cases occurring in the practice of private physicians. They also included arrangements for the bacteriological examination of sputum, to assist in the early diagnosis of this disease, the inspection of all reported cases in tenement houses, lodging-houses, hotels, and boarding-houses, and the instruction of the patients and their families as to the nature of the disease and the means to be taken for its prevention; the inspection of the premises in all instances where deaths were reported as due to tuberculosis, and the issuing of orders, when it was deemed necessary, upon the owners of apartments which had been occupied by consumptives and vacated by death or removal, requiring that such apartments be thoroughly renovated, by cleansing and by painting, papering or kalsomining, before they were again occupied by other persons; and, finally, the education of the public by wider and more comprehensive methods as to the nature of this disease. Placards were attached to the doors to prevent the re-occupation of apartments which had been vacated by death or removal before the orders requiring renovation had been complied with. Under the resolutions by virtue of which these measures were enforced 4166 cases of tuberculosis were reported in 1894, 5818 in 1895, and 8334 in 1896. So far as was possible, all of these cases, except those in private houses, were visited or the premises where they had lived were inspected, and, in addition, the premises occupied by persons dying from tuberculosis (numbering each yearly 6000) were inspected, and such action taken as was considered possible and desirable. Altogether the premises and cases thus coming under observation during these three years numbered more than 35,000. These facts convey some idea of the enormous sanitary importance of the subject. It is conservatively estimated that there are at least 20,000 cases of well-developed and recognised pulmonary tuberculosis now in New York City, and

an additional large number of obscure and incipient forms of disease. A very large proportion of the former cases constitute more or less dangerous centres of infection, the degree of danger depending in each instance upon the intelligence and care which is exercised in the destruction of the expectoration. All the suffering and death consequent upon the prevalence of this disease, in view of modern scientific knowledge, is largely preventable by the careful observation of simple, well-understood, and easily applied measures of cleanliness, disinfection, and isolation."

In 1897 the Health Board adopted some recommendations made jointly by Dr. Mitchell Prudden and Dr. Biggs to the effect that pulmonary tuberculosis should be notified in the same way as typhoid fever and diphtheria. Besides this, all public institutions are required to report every case of tuberculosis within one week of its coming under observation and the discharge or transfer of such patient. Dr. Biggs passed on to consider the measures taken for the inspection of milk and meat with reference to the question of tuberculosis, and described how even among the poorer classes the instructions given by the Health Board had resulted in greater care being taken to disinfect sputa, and as far as possible keeping the clothing of the patient apart from that of others. Referring to the medical inspection of school children Dr. Biggs continued: "Early in 1897, under the authority of a special resolution of the Board of Estimate, 150 medical school inspectors were appointed by the Health Board after Civil Service examination. The duties of these inspectors consist in the examination daily, at the opening of the primary and grammar departments of each of the public schools and of the parochial and industrial schools, of all the children who are set apart by the respective class-room teachers as not appearing to be entirely well. These children are examined in each school by the inspector detailed to the school, and are either excluded from the school or returned to the class-room, depending on the result of the examination. Every pupil found to be suffering from any form of general contagious disease, or any contagious disease of the eye or parasitic disease of the skin, is sent home with a written statement to the parents of the cause for the action, and in the case of the eruptive diseases and diphtheria reports are immediately forwarded to the chief inspector of contagious diseases, and by him referred to the various district medical inspectors for inspection and supervision."

Dr. Biggs then gave an account of the educational work of the Board by means of leaflets relating to the prevention of tuberculosis, the care and feeding of infants, the transmission of contagious diseases, and the like. These are written in simple language and distributed among the population, and have proved of the greatest value in bringing about a better state of things especially among the poorer residents. Dr. Biggs then gave some statistical details as to the health of New York City for the past four or five ten-yearly periods, figures showing a steady decline in both mortality and morbidity. As to diphtheria, the mortality had decreased by nearly 40 per cent. since the introduction of antitoxin in 1894. "Finally," said Dr. Biggs, "I believe it may be truly said that there is no great city in the world to-day which, in the broad sense, is cleaner and healthier than New York. By clean is meant the purity of the atmosphere, the cleanliness of the streets, the abundance and purity of the water-supply, and the efficiency of the sewerage system. I wish that so much could be said as to the character of the habitations of the poor, the public baths and public convenience stations, the breadth of its parks and public commons, and the type of its charitable and penal institutions. In many of these respects New York is deficient; but great and rapid advances have been made and are being made in these matters. When it is said that no city is healthier than New York, this statement is made with a consideration of all the sanitary factors in the situation, such as the size and density of the population, the varied nationality of the inhabitants, the character of climate, &c. Nowhere can there be found a fuller recognition than in the United States of England's high standard of excellence in public medicine or a more sincere appreciation of her vast contributions to the progress of sanitary science. But she must look well to her laurels if her cities are to be kept cleaner than the great cities of the United States, and her urban population made healthier and happier than the same class on this side the Atlantic. In the United States we are prepared to adopt, without hesitation, the best that England produces or that the world affords in public medicine, as well as in science, art, and commerce; and, notwithstanding the persistent and determined efforts of our sensational press, the sentiments of the medical profession and of the people at large towards Great Britain are those of sincere respect for her institutions, profound admiration for her great achievements, and warm affection for her people. If I have appeared in this address to have dwelt too long upon and described too fully some of the sanitary methods followed in New York I would urge in extenuation that it has been from a desire that you should know our institutions and methods as well as we know yours, and that through the medium of this great medical association—the largest and most influential in the world—the two great English-speaking nations might in this respect be brought into somewhat closer and more intelligent relations with each other, and thus greater good redound to preventive medicine. Then the people of both nations will live healthier, and therefore happier and longer, lives."

A vote of thanks was heartily accorded to Dr. Biggs for his excellent address.

A letter was received from the American Public Health Association, cordially inviting the members of the British Medical Association to be present at its twenty-fifth anniversary meeting, to be held in Philadelphia in October next.

After one or two formal resolutions the business terminated.

THE SECTIONS.

THE work in the various sections commenced at 9.30 A.M. on Wednesday, Sept. 1st, and in most sections the first proceeding was the delivery of the Presidential Address.

MEDICINE.

The President of the Section, Dr. STEPHEN MACKENZIE, delivered his Presidential Address on Wednesday morning, Sept. 1st, taking for his subject:

The Influences that have Determined the Progress of Medicine during the preceding Two and a Half Centuries.

"On this very interesting and, indeed, unique occasion," he said, "when the British Medical Association meets for the first time on Canadian soil, the mind is irresistibly led to compare the condition of medicine at the present day with that which existed when Europeans first settled in Canada and to trace the paths by which progress has been made. When Maisonneuve and his companions landed in what is now the Custom House-square in Montreal in 1642, and when, shortly after, the first hospital was established by the missionary priests, medicine was in a very rudimentary stage. Though anatomy had been prosecuted for some centuries, chiefly on the European continent, it formed no part of ordinary mental education; physiology in the scientific sense was unborn, and organic chemistry not yet created. The medical teaching of that day consisted mainly of the ancient doctrines of the four elements and their corresponding temperaments; of the separate functions of the vegetative, sentient, and rational souls; of the agency of the natural, vital, and animal spirits, that had continued to be taught with very little variation from the time of Galen. It was an age of aphorisms, definitions, systems, and nosologies. Medical opinions were so dominated by theories and burdened by the weight of authority that the phenomena of disease for the most part passed unnoticed and their teachings were neglected. Such knowledge of medicine as the enterprising members of the medical profession who accompanied the early expedition to Canada possessed must have been of the most elementary character, gained by apprenticeship under teachers whose knowledge consisted in the doctrines of Hippocrates and Galen and such crude experience as they themselves had obtained. Without doubt they were as zealous and earnest in their professional duties as we as a profession are to-day, and their treatment was as certainly unfettered and unrestrained by any scepticism as to the theories they had been taught or doubt as to the efficacy of their remedies for disease. But this period was the dawn of a new era in science and medicine. Harvey's great work 'On the Movements of the Heart and Blood' and Bacon's 'Novum Organon,' had recently been given to the world, and the seventeenth century was a time of the greatest activity and discovery in geography and in science. What a gulf separates that medicine of 250 years ago from that of to-day! In tracing

how it has been bridged it is right that we should justly apportion the influence that various spheres of activity have exercised in reaching our present position." Dr. Mackenzie then referred to the gradual advance in the study of anatomy. Before the seventeenth century Vesalius and Sylvius, Fallopius and Fabricius had already advanced our knowledge in a great degree. The seventeenth and eighteenth centuries were marked by the researches of Haller, Hunter, Spallanzani, Hewson, and Morgagni, the last-named paying special attention to morbid anatomy. With the beginning of the nineteenth century came Bichat and Malpighi, who, by the aid of the microscope, were enabled to prosecute researches in minute anatomy hitherto beyond the reach of any observer. After referring to the various instruments which nowadays aid in diagnosis, such as the ophthalmoscope, the laryngoscope, the clinical thermometer, and the various applications of electricity, Dr. Mackenzie mentioned the stethoscope and the enormous stride forward taken by Laennec in conjunction with Auenbrugger, who had introduced percussion. "But," continued Dr. Mackenzie, "during the period that bridges the time since Canada first became populated by Europeans to the present day probably no discovery has exercised a greater influence in medical science or conferred more lasting benefits on mankind than the introduction of vaccination by Jenner. It is not necessary in such a meeting to trace how Jenner was led to his discovery. Protective inoculation from small-pox by the introduction of the small-pox matter had long been known in the East and had been introduced into England by Lady Mary Wortley Montagu, but Jenner's rare merit consisted in testing the statement made to him by Gloucestershire rustics by scientific methods and experiments and by waiting for years until the value of the protection, the 'variolæ vaccinæ' introduced by inoculation into the human subject, had been tested by exposure to contagion from small-pox, and until time had elapsed to demonstrate that this protection was no ephemeral influence, but of more or less permanent duration as much as that of an attack of small-pox itself. 'I never expected it would do more, and it will not, I believe, do less,' are Jenner's words. It was not until many years after he had satisfied himself as to the protective influence of the vaccine virus that Jenner in 1796 published his observations. It is needless to trace the effects this discovery has had in saving human lives and in averting the disfigurements with which those who escaped death from the disease were almost invariably afflicted. It is probable that the full significance of his discovery was not revealed to Jenner himself, and, on the other hand, it is possible that he exercised self-restraint in not speculating as to the possible result that might accrue from his remarkable inquiries. Certain it is that the indirect results that have followed from Jenner's discovery that an attenuated virus was protective against contagion from the disease from which the virus was originally obtained have only recently been fully utilised. Probably several causes have been concerned in the want of continuity of progress in this direction, the most important of which has been the difficulty in isolating and handling the virus in many contagious diseases. The investigations into the full extent of the value of inoculation with attenuated virus and derivatives of bacteria have only been commenced in the last few decades since bacteriology has been cultivated by Pasteur, Lister, Koch, Klein, Gaffky, Martin, and others, and the whole subject, with the aid of organic chemistry, made a branch of exact science. Bacteria are now classified by their morphological qualities, by their reactions to staining reagents, by their modes of growth in various media; the temperature at which they grow and at which they are destroyed is determined, their need of oxygen ascertained, the parts of the body they make their habitat studied, the effects of their invasion in the tissues, and the protective powers of the organism observed. The chemical products to which they give rise are isolated, their nature ascertained, and their effects observed on the living body independently of that of the organisms by which they are formed. Finally, the knowledge thus obtained is turned against the bacteria. The virus is attenuated by various methods, often by passing through the body of an animal immune to the disease, and its exact strength is ascertained. It is then used for protective inoculations or for antidotal purposes in those already attacked by the disease from which the virus was originally obtained. Jenner's and the recent researches are equally scientific—observation, induction, experiment; but the differences in carrying out the inquiry on small-pox by Jenner and that of any specific disease due to an organised virus at the present time illustrate my theme of how the progress of medical science has been effected. Great as it has been, and precise, as a rule, as are our methods of research, it is remarkable that up to the present time in two diseases in which protective and curative inoculations have been most conspicuously successful—namely, small-pox, in which we had, thanks to Jenner, the first vaccine; and in hydrophobia, in which Pasteur succeeded in attenuating the virus and using it as an antidote—we have not succeeded in finding the micro-organism that is the true virus, unless, indeed, Monckton Copeman has at length done so in the case of small-pox and vaccinia. As a matter of fact, this organised virus has yet to be discovered in many of the most common specific communicable diseases; but the knowledge gained by the study of some members of this class in animals, and of some—for example, diphtheria—in the human subject, has afforded a basis of knowledge applicable to the whole group. There is one other branch of medical science which has been incidentally alluded to in the previous remarks, but which requires fuller recognition in the survey of the influences that have governed our progress. I allude to experimental investigations in animals. In the seventeenth century in the hands of Harvey and others, but more especially in the eighteenth by the labours of Hunter and others, and in the nineteenth century, this method of observation has been the basis of normal physiology and, later, of abnormal physiology or pathology and therapeutics. These investigations have enabled us to reach a degree of knowledge not obtainable in other ways, not only of value to man, but also to the lower creation." Dr. Mackenzie then passed on to consider the progress of therapeutics, including especially preventive medicine. With regard to clinical medicine he referred to the separation of enteric from typhus fever, a result brought about by the labours of Jenner, Stewart, Murchison, Liebermeister, and the American observer Smart. Relapsing fever had been allotted its proper place owing to the labours of Barker, Cheyne, Graves, Stokes, and Obermeier, who described the specific spirillum in 1873, while another fever parasite—namely, the plasmodium malariæ—had been isolated and proved to be the cause of malarial fever by Laveran, Osler, and others. As to diseases of the kidneys, Cotugno, in 1770, discovered albumin in the urine, but it was owing to the work of Richard Bright that the recognition of diseases of the kidneys was put upon a firm basis. Diseases of the nervous system had been mainly cleared up by physiological and anatomical labours though clinical medicine had lent valuable aid. Dr. Mackenzie then referred to the recognition of Addison's disease and the connexion between myxœdema, cretinism, and the thyroid gland. Owing to the great and undoubted advances in medicine human life had been prolonged and the mortality of most diseases sensibly diminished, although there was an increase of mortality from cancer and some other complaints. In conclusion he said: "The gains have been greater than the losses, and this is not the occasion to discuss why we have failed in this direction. But, whilst the review we have taken of the progress of the science and art of medicine is encouraging, we must remember there will always be a limit to our powers of curing disease. When any part of the higher tissues is destroyed it can never be replaced by the recuperative powers of Nature or improvements in medical science. Sclerosis and destruction of the nervous elements means that they are almost irremediably lost. If the lung is destroyed by tubercle or other disease it can never be replaced. Nothing can make good disintegration of the kidneys or liver. Nor shall we be ever able to retard the effects of time. 'To die is as natural as to be born,' it has been truly said, and the silver cord that chains us to this world must sooner or later give way. Great as have been the improvements in the treatment of disease, our greatest triumphs, in the future as in the past, will consist in the prevention of disease. One of the most important features in modern medicine has been the remarkable development of medical societies and associations, and the fact that they are yearly increasing is strong evidence that the profession finds them useful in its work. They enable us to submit our observations and inquiries, our theories and our practice, to the criticism of those most competent to discuss them, and thus to separate the wheat from the chaff. The meetings of the British Medical Association, amongst others, have been most useful in this respect. Let me conclude by expressing a hope that the work done at this meeting at Montreal, and especially this

Section of Medicine, will aid in the search after truth, will stimulate and ennoble the aims and energies of those taking part in its proceedings for the advancement of knowledge and the good of mankind."

Arthritis Deformans.

Dr. JAMES STEWART (Montreal) opened a discussion upon Arthritis Deformans with special reference to its relation to Rheumatism, Nervous Disease, and Tuberculosis. He gave an analysis of forty cases occurring in his practice, and came to the following conclusions. 1. Arthritis deformans is a disease prone to occur in people of a rheumatic tendency who have suffered from subacute rheumatic attacks. The presence of infectious disease of any kind tends to increase this tendency and so do depressing conditions. 2. There is no sharp dividing line between certain cases of chronic rheumatism and the earlier stages of rheumatic arthritis. 3. There is not sufficient evidence to support the views commonly held as to the nervous origin of arthritis deformans. 4. There is no direct relationship between tuberculosis and arthritis deformans. 5. The polyarticular forms of arthritis deformans have clinically the features of an infectious disease. Treatment generally was unsatisfactory. He had found considerable benefit from superheated hot-air baths.

Dr. SHINGLETON SMITH (Bristol) did not believe in the connexion between arthritis deformans and rheumatism. He was inclined to regard the disease as essentially a poly-arthritis.

Dr. LINDSAY (Belfast) complimented Dr. Stewart on his lucid and practical paper. He thought the connexion of arthritis deformans and tuberculosis was purely accidental. He had been much struck with the nervous symptoms in arthritis deformans, especially the atrophy of the muscles, and was inclined to regard them as due to peripheral neuritis, perhaps the result of toxic influence. He believed in the connexion between arthritis deformans and chronic articular rheumatism, and had often been at a loss to differentiate between the two conditions.

Dr. OSLER (Baltimore) had been impressed by the nervous symptoms in arthritis deformans. Some of the cases of the disease observed by him had simulated amyotrophic lateral sclerosis.

Professor JACOBI (New York) thought the whole subject was in a very unsatisfactory state, and that we had no real knowledge of any rheumatic condition except acute rheumatism. He was inclined to side with Dr. Osler's views, and to think that arsenic was the best remedy. He complained that no attempt had been made to define arthritis deformans.

The PRESIDENT of the Section thought it probable that several different states were included under the term arthritis deformans. He referred to the opinion of the late Dr. Sutton, who held that arthritis deformans was essentially a disease of debility.

Dr. STEWART having briefly replied, the discussion came to a conclusion.

Dr. TYSON (Philadelphia) read a Note on the proper use of Terms to denote Myocardial Changes.—Dr. FUSSELL (Philadelphia) read a paper on Two cases of Hæmophilia.—Dr. J. B. MCCONNELL (Montreal) read a paper on Pyo-pericardium following Pleuro-pneumonia; Pericardiotomy; Recovery.

SURGERY.

In the Section of Surgery the President, Mr. CHRISTOPHER HEATH, delivered an address upon—

The Teaching and Progress of Surgery.

After a brief introduction he referred to the two subjects which were to be discussed at this meeting—viz., (1) Appendicitis and its Surgical Treatment; and (2) the Treatment of Cancer of the Rectum, with special reference to the high operation, and then continued: "Nothing, I venture to think, is more remarkable than the recent progress of abdominal surgery. Twelve years ago I was engaged in editing a 'Dictionary of Practical Surgery,' and neither appendicitis nor the operation for removal of the rectum, with which Kraske's name is connected, was mentioned in it, although I had the assistance of the leading London hospital surgeons. Kraske's original paper, I may mention, was published in 1885, and is referred to in Ball's work on the rectum, published in 1887, and in most surgical works since that date. The subject of appendicitis, so far as British surgery goes, dates from a paper read before the Royal Medical and Chirurgical Society in February, 1888, by Mr. Frederick Treves, though the title of it was 'Relapsing Typhlitis treated by Operation.' In August of the same year Mr. Treves opened a discussion on 'Surgical Treatment of Typhlitis' at the meeting of the British Medical Association at Leeds, and subsequently published his address with additions and alterations in the form of a monograph entitled 'The Surgical Treatment of Perityphlitis.' But it is not merely in these two departments that progress has been made. The surgery of the kidney and of the liver has advanced *pari passu* with that of the hollow viscera, and the labours of Morris and Robson in England, and of Keen and others on this side of the Atlantic, have done much for the relief of suffering and the prolongation of life. Looking back over forty years of professional life nothing surprises me more than the change which has come over the treatment of calculus. In my student days to see Fergusson cut for stone by the lateral method was to witness an operation as near perfection as was conceivable, and the dexterity and rapidity with which the calculus was extracted were marred only by the frequency with which death from septic causes spoiled the skill of the surgeon. To have one's first lithotomy was an event in the life of the young surgeon, and every now and then a reputation was spoiled by some *contretemps* in the public performance of the operation. Later, I was the frequent witness of my colleague, Henry Thompson's skill in using the lithotrite to break up the calculus in a series of 'sittings.' Then came 'litholapaxy,' or rapid lithotrity, which we owe to Bigelow, the great American surgeon; and, lastly, that recurrence to the old high or suprapubic operation which was due to the Scandinavian surgeon Petersen. Hence the student of to-day rarely, if ever, sees a perineal lithotomy, and as a consequence his interest in the anatomy of the parts concerned in the operation has greatly diminished. Possibly the surgeons of the last generation laid too much stress upon anatomical details, but it is somewhat remarkable to find how little anatomy seems to serve for practice in the present day. I am told by those who are teaching anatomy now that it is difficult to get the student to take the trouble to make a neat dissection because he can find in the various museums, and notably at the Royal College of Surgeons of England, such beautiful preparations in spirit that he prefers to study from them or from pictures rather than labour to get out the details for himself. If this is so I can only regret that the present race of students is so short-sighted, for without a working knowledge of human anatomy I can conceive of no progress in surgery. But I regret to find that, in Great Britain at least, the teaching of anatomy is gradually getting more and more into the hands of professors who are anatomists, but not surgeons, and that their tendency is to lay stress upon transcendental details rather than surgical relations. But are we not overdoing the scientific teaching of the man who has, after all, to get his living as a practitioner of medicine, surgery, and midwifery? When the medical curriculum was lengthened by a year it was hoped that the additional time would be devoted to clinical work, but I fear that it is by no means always the case, for it is not uncommon for the student to take three years in passing his primary examinations, with the result that but two remain for the study of medicine and surgery. When I became a student of medicine I took to heart the advice of my teacher of physiology, William Bowman, and never allowed a day to pass without visiting the hospital, and though as a lad of sixteen I failed of course to appreciate the importance of all that I saw, yet I saw it, and I can carry my mind back now to cases seen and lessons learned in the early fifties which are of service to me at the present time. But the student is practically forbidden to enter the wards now until he has satisfied the examiners in anatomy and physiology, which he may or may not do in two years, and then there are but three years left for him to study *totam rem medicam*. Far be it from me to decry the modern methods of teaching medicine in the wards of our hospitals. I believe that the care taken to induct every student into the mysteries of auscultation and percussion is beyond praise, and if with some teachers treatment is regarded as of secondary importance, at least the student has the opportunity of studying the *vis medicatrix naturæ* untrammelled under one teacher, and of watching the effects of every new drug upon the human system under another. But all this takes time, and so also the elaborate manipulations of the gynæcological department, the researches of the

pathological professor, and all the other teachings of the third and fourth years. And where, then, does surgery come in? Why, I consider myself fortunate if I can secure the regular attendance of candidates for a surgical diploma for the last three months, when their names are put on my list, and I subject them to rigid surgical cross-examination. But if I venture to refer to an illustrative case of last year I find that no one present saw it or even heard of it, though at the time the whole surgical staff may have been in consultation upon it. How, I ask, is it possible for the student to see the serious surgical ailments which are not very common, such as aneurysm, tumours of bone, tetanus, &c., if his attendance in the surgical wards is limited to a few months? And yet there has never been a time of greater activity in operative surgery, not only among hospital surgeons, but among general practitioners, who, thanks to anæsthetics and antiseptics, undertake operations of a magnitude which the hospital surgeon of the last generation would have hardly attempted. Without a knowledge of anatomy, of pathology, and histology progress in surgery is impossible, and it is for those who hold the important positions of teachers in our great medical schools to insist upon a foundation of scientific and practical training being given to our students if they are to become the successful practitioners of the future. The growing tendency of the non-medical teachers of collateral science to regard their particular subject as the one most essential for the medical student must be restrained, and the preliminary period of medical study must be cleared of many obstructions if the student is to have the necessary time to devote to the thorough study of those strictly medical subjects which will fit him to be a sound, practical, and at the same time scientific physician and surgeon."

Appendicitis.

A discussion on Appendicitis then followed, the opening remarks being made by Dr. G. E ARMSTRONG, of Montreal. Dr. Armstrong read a report upon 517 cases seen in the leading Montreal hospitals. This report showed the condition to be most common between the ages of twenty and thirty, and to occur twice as often in males as in females. Discussing the etiology Dr. Armstrong thought that anything that could remove the epithelial lining from the mucous membrane of the appendix might be the starting-point of the mischief. In the total number of cases reported the average mortality was 12·8 per cent.; but from 1853 to 1890, before operation was done—that is, in pre-operative days—the mortality was 23·8 per cent. Of the 517 cases, 389 were operated on and 128 treated without operation. In this latter list the mortality was 3·12. Of 319, 81 were interval cases, in which there was not one death. Of 305 operated on in the acute stage 63 died. The great point in treatment was, Dr. Armstrong considered, to anticipate the severer forms resulting in septic peritonitis by early surgical interference. His rule was to advise operation at the end of twenty-four or thirty-six hours if the patient was not improving.

After some remarks from Dr. WARD COUSINS, who credited American teaching and example with having stimulated English surgeons to earlier recourse to operative treatment, Mr. JORDAN LLOYD said that real appendicitis, strictly speaking, was a disease confined to the appendix, and when this was the case there were two sorts: First, those simple cases which got well; and second, those in which the appendix slowly distended with irritating fluid charged with organisms, which fluid made its way through into the peritoneal cavity and gave rise to other forms of the disease with complications. In such cases the physicians and surgeons should see the case together. Early diagnosis was very important, and too much stress, he thought, had been laid on McBurney's point, the localised point of tenderness on deep pressure that is supposed to be diagnostic of appendicitis.

Dr. VANDER VEER (Albany, N.Y.) said he thought that possibly the British surgeons might think the American surgeons were rather too eager to operate.

Dr. W. H. HINCKSON (Montreal) deprecated the too great reliance upon statistics.

Papers were then read upon Ventral and Umbilical Hernia in the same Patient, by Dr. A. E. GARROW (Montreal); upon Traumatic Aneurysm of the Internal Maxillary Artery treated by Ligature of the Common Carotid, by Mr. H. LANGLEY BROWNE (West Bromwich); upon Intussusception of the Vermiform Appendix and Cæcum, by Dr. T. A. MCGRAW (Detroit, Mich.); and upon Lateral Curvature of the Spine treated by Posture and Exercise, by Mr. BERNARD ROTH (Brighton).

The Suturing of Wounds.

A paper was then read upon this subject by Dr. HENRY O. MARCY.

Dr. Marcy stated that, notwithstanding the revolution in surgical procedures, in a large minority of operation wounds made in healthy structures suppurative processes were still to be met with to some extent. The surgical technique was complete for the making of a wound aseptic, but the difficulty was in maintaining it in this condition. He asserted that the cause of this was definite—viz, an open wound. The remedy was to be stated with equal emphasis—hermetically close the wound and seal at the time of operation without drainage. He discussed at length the drainage-tube, its purposes, danger, and in aseptic wounds its worse than uselessness, and referred to the micrococcus pycgenes albus as being in his opinion the most common cause of wounds under abundant antiseptic protective dressings taking on infection when drainage was used, and as being also the cause of stitch abscesses, and the most usual source of infection coming from the surgeon's own hands. Careful disinfection of the hands was of much greater value to the patient than a marble hall for an operation amphitheatre. Dr. Marcy discussed the varieties of suture material and made the deduction that all aseptic wounds should be closed by absorbable sutures under the most careful aseptic conditions. He recommended that sub-cuticular sutures should be used for the coaptation of the skin. The wound should then be dried and sealed with iodoform collodion reinforced by a few fibres of absorbent cotton. He condemned catgut, not so much for the difficulty of sterilisation, as for its inherent defects, a large share of its strength resulting from being twisted and kept dry. When wet, as it must continue to be in the tissues, it was elastic, unreliable in knotting, and untrustworthy. Before twisting and drying it was a very thin, flat band of connective tissue, the fibres of which crossed obliquely for the physiological purpose of accommodating the intestinal contents, and was not unlike a very delicate silk fabric cut diagonally. The advantages to be obtained from the use of connective tissue as a suture material were apparent, not alone because it was absorbable, but because, as Dr. Marcy demonstrated by repeated experimental studies upon animals, it was first surrounded by leucocytes which, little by little, invaded the suture. As the process of absorption went on, these cells were changed into connective tissue corpuscles, and, as a consequence, the suture material was more or less completely replaced by a living band of connective tissue, this of course in many instances proving to be an advantage of the first importance. At first he used the tendons from the buffalo, moose, and caribou, the advantages of which he emphasised in a paper read at the International Medical Congress in London, in 1881. Such tendons had been used from time immemorial by the North American Indians, for the sewing of robes. The following year, Dr. Marcy, as the result of systematic and extended observations, ascertained that the tendons taken from the tail of the kangaroo were greatly to be preferred, since they were smooth, even in any variety of size, had never been subjected to decomposition, and were much less difficult of sterilisation, while in strength they exceeded in equal weight that even of silver wire. When properly chromicised they held in the tissues for about three months. They were now so generally used and well known that only reference to them was required. Coaptation and fixation at rest, with as little force as possible, of like structures was the object sought. Suture material more than required to secure this purpose was detrimental. It must be applied with a minimum of devitalization of the tissues. The interrupted suture was faulty in that it held at only the single joints of insertion, and in order to coaptate the structures in large wounds undue compression, often to devitalization of the part constricted, had to be used. Each stitch required a knot, which was slow of absorption. Like structures, as far as possible, should be joined, fascia to fascia, muscle to muscle, &c. When coaptation had been accurate there were no pockets left for the undue retention of fluids, and as a consequence no drainage-tube was required. Dr. Marcy much preferred the full-curved Hagedorn needles, since they penetrated the tissues with ease and accuracy and might generally be used without the intervention of forceps. The continuous suture required but a single knot, and undue constriction was less liable, since a

compensation occurred equalising the force applied to the entire suture. As a rule fatty structures should not be sutured, since necrosis is not seldom a resultant. The over and over (glover's) stitch was faulty in that it constricted the tissues unduly. Dr. Marcy applied the suture deeply from side to side, the needle being introduced parallel to the long axis of the wound, and he therefore called it the "parallel suture." The needle was inserted exactly opposite the emergence of the preceding stitch and, when drawn upon, it would be noted that the surfaces were evenly coaptated, and that the suture was deeply implanted in healthy tissues, crossing the wounded edges at right angles. The sub-cuticular suture was effected in precisely the same manner and the wound sealed. An aseptic wound thus closed with buried aseptic tendon sutures would remain aseptic, and in well vitalised structures was followed by primary union. No expensive and troublesome dressings were required. The subsequent nursing and care were very greatly diminished. The anxious foreboding of the surgeon lest "something should go wrong with the wound" was avoided. No stitches were to be removed, reducing greatly the dread and anxiety of many patients. Safety was greatly enhanced and the period of convalescence shortened. When the work had been done with care the resultant cicatrix was often scarcely visible—a matter of much importance in some parts of the body. Some operations hitherto impossible had been rendered feasible by the use of the buried absorbable suture—e.g., the restoration of the obliquity of the inguinal canal in the male upon which was dependent the cure of hernia. Indeed, it was for the cure of hernia that Dr. Marcy first used buried animal sutures in 1870. He recently reported to the American Medical Association that he was in his four hundredth series of hernia operations, with over 90 per cent. of resultant cures. In laparotomy the closure of the abdominal wound was greatly strengthened by the use of aseptic absorbable sutures. It was estimated that 10 per cent. of laparotomies, where the wound was closed by a single line of deep interrupted sutures, were followed by hernia. Dr. Marcy reported more than 500 cases of aseptic laparotomies in his practice with but a single resultant hernia. In concluding he urgently recommended that every surgeon should familiarise himself with the method of wound closure by means of buried absorbable sutures, preferably tendon, predicting that these would soon be generally adopted, and that they would hold the first place in the technique of modern treatment of wounds.

PUBLIC MEDICINE.

The Presidential Address was delivered by Dr. E P. LACHAPELLE, President of the Board of Health of the Province of Quebec, his subject being

The Progress of Sanitation in Canada.

After some words of welcome to his audience, Dr. Lachapelle gave a brief review of the hygienic measures introduced under the French *régime* (1603–1763). In 1667 Louis XIV. of France established for the Civil State a system of registration which is still in force in the Province of Quebec, the registers of baptisms, marriages, and burials being kept by the clergy, who furnish the civil authorities with copies. The British domination commenced in 1763, but under it there was no permanent health legislation up to 1867—that is, until the period of Confederation. Dr. Lachapelle continued: "With the advent of Confederation we enter a period of positive systematisation. The British North America Act defines the respective rights and powers of the Federal Government, as well as those of the Provincial Governments, and we will now review in a detailed abstract the laws successively enacted at Ottawa and in the different provinces. All matters relating to foreign countries and to commerce are of federal jurisdiction, and accordingly, ere the first year of the Confederation (1868) the Federal Government enacted an Immigration Act destined to be completed later (1871) by the Quarantine Act, and rendered most effective by the laws of 1893. Actually, our ports are protected by eight well-organised quarantine stations: Grosse Isle (Quebec), Halifax (Nova Scotia), St. John (New Brunswick), Sydney (Cape Breton), Hawkesbury (Nova Scotia), Chatham (New Brunswick), Charlottetown (Prince Edward Island), and William Head (British Columbia). The quarantine organisation is under Ottawa's exclusive control, but on other questions (vital statistics, contagious diseases in animals, food adulteration) the provinces have a concomitant jurisdiction. In most of the provinces of the Dominion of Canada the local legislature has, by a statutory law, delegated its powers to a Provincial Board, charged with enforcing sanitary measures, and in whom, consequently, lies the authority. The law, however, varies on this matter in different provinces. Ontario and Quebec are, perhaps, the best-managed provinces; in any case, they are the ones in which the organisation is the oldest. We will examine them conjointly. The Provincial Board of Ontario was founded in 1882, that of Quebec in 1886. It is those two boards that have enabled public hygiene to make the greatest progress in Canada. In Ontario compulsory vaccination of all children over four months of age has been provided for by the statute, and school teachers may require a certificate of vaccination from intended pupils. The Provincial Government has the entire control of vital statistics (1896), the compiling being done directly by the secretary-treasurer of each municipality. Finally, the Food Act, very explicit in regard to cities, renders more definite the federal laws on food adulteration and specifies their bearing. In the Province of Quebec vaccination is obligatory by statute in four cities, but any other municipality may render it compulsory. The keeping of the registers of the Civil State is still, as in the days of Louis XIV, confided to the care of the clergy of whatsoever denomination, and it is from those gentlemen that each month the Provincial Board of Health receives the certificates establishing the causes of death and those reporting the marriages and births. From these reports the Board compiles its statistics. Regarding the adulteration of foods, the Provincial Board has power to make regulations to supplement, in a certain measure, the federal laws. In relation to the prevention of contagious diseases, hygiene in factories, sanitation in general, and the suppression of nuisances, the Quebec Provincial Board has issued permanent and very precise regulations, and has formulated in them a standard of effectiveness that must be attained by the municipal boards. In both Ontario and Quebec the Provincial Boards may exercise the powers conferred upon the local boards, if such local boards neglect or refuse to perform their duties. New Brunswick (1887) and Nova Scotia (1893) possesses somewhat identical organisations, the Lieutenant-Governor in Council having the right to legislate on sanitary matters. The municipal boards in both these provinces enjoy similar powers; only in Nova Scotia the Lieutenant-Governor can put his veto. The sanitary laws of New Brunswick (1887-88-89) very much resembled those of the province of Quebec, as they confer on the Provincial Board the power to make regulations respecting the prevention of contagion, the inspection of food, and of insalubrious industries, drainage, and the repression of nuisances. The Registration Law (1887) provides for the publication of vital statistics. In Nova Scotia the authority of the provincial board with regard to contagious disease is simply advisory; it may, however, during an epidemic, substitute itself to inefficient municipal boards. Manitoba (1893) admits of a special organisation which seems to suit the needs of a country whose population is dispersed over a vast extent of territory. Its Provincial Board is composed of five members—a veterinary surgeon and four physicians. For the needs of local administration the four physicians are titled "inspectors," and the province is divided into four districts. In each of these districts the authority of the inspector is supreme: he may, if he believes it necessary, set aside all orders and by-laws enacted by local authorities. British Columbia has (1895) a Provincial Board which, according to the statute, seems to be only advisory, but which, nevertheless, has established very complete and very effective regulations. We will even point out a measure that surpasses those of any other provinces: it is the prohibition of discharging sewage into any river. Prince Edward Island has no provincial board. It has a good law respecting vaccination, and by its Health Act local boards are appointed in two cities, and the Lieutenant-Governor in Council is empowered to appoint a Board of Health in each county. In the North-west Territories a law relating to hygiene was passed in 1882. Its objects are only preventive. The Lieutenant-Governor can hinder any person within the Territories from leaving a locality in which there exists a contagious disease. He can also delay at the frontiers any suspicious outsider. He can divide up the Territories into sanitary districts and appoint medical health officers if he judge such measures expedient. Canada, with regard to hygienic matters, is therefore advancing rapidly in the path of progress."

Mandatory Measures in dealing with Measles, Whooping-cough, Tuberculosis, and Leprosy.

Several papers were read on this subject, among the authors being Dr. P. H. BRYCE, Secretary of the Provincial Board of Health, Ontario; Dr. C. O. PROBST, Secretary State Board of Health, Ohio; and Dr. H. HANDFORD, of Nottingham, England.

Dr. BRYCE'S paper was a lengthy one. He discussed measles, scarlet fever, whooping-cough, and tuberculosis. After citing statistics he advocated the closing of schools when scarlet fever and measles were prevalent in epidemic form. The use of notification cards and isolation were dwelt on at length. He was in favour of compulsory measures and the early removal to hospital in cases of measles and scarlet fever. He spoke of leprosy in the United States of America as having caused sixteen deaths. In Canada it did not seem to have any significance. He knew of, and referred to, the Leper Asylum at Tracadie, and said that if the disease was contagious segregation was necessary. With regard to isolation in tuberculosis, the danger was from the bacilli; they might live for a year. Houses which had been occupied by consumptives should be disinfected. Tuberculosis was a contagious disease and great care was necessary. The sputum should be disinfected.

Dr. PROBST went over much of the same ground. For men in the American Navy he recommended early recognition of the disease and special hospitals. Any plan for the prevention of tuberculosis must consider the liability of animals to infection and the question of infected milk. Regarding the care of herds of cows, the healthy animals should be separated from the unhealthy. Calves born of unhealthy cows should be separated and fed on healthy milk. The bad ventilation of stables was responsible for much of the disease among cattle.

Dr. HANDFORD, in his opening remarks said that there was no want of legislation in England regarding such matters, but they did want a Minister of Public Health. Many advances must be made in hygiene and public health. Regarding mandatory measures in England compulsion had completely failed. The people must be educated, their confidence must be gained. The education of the wealthy in such matters was as necessary as the education of the poor. In Nottingham no case of scarlet fever had ever been removed to a public hospital on a magistrate's order. As a result of eight or ten years' observation 90 per cent. of the cases of scarlet fever were now voluntarily sent to the hospitals in his district.

Dr. OLDRIGHT (Toronto), Dr. WOLFRED NELSON (New York), and Sir JAMES GRANT (Ottawa) also spoke.

OBSTETRICS AND GYNÆCOLOGY.

The Presidential Address in this section was delivered on Thursday, Sept. 2nd, by Dr. W. JAPP SINCLAIR, Professor of Obstetrics and Gynæcology, the Owens College and Victoria University, Manchester, who selected as his subject

The Injuries of Parturition: the Old and the New.

Dr. Japp Sinclair began his address by telling the sad story of two healthy primiparæ who in the course of normal labour had received serious injuries from the use of forceps. He then compared this sort of haste with the helplessness of ancient obstetric practice which allowed women to die in prolonged labour without making an attempt to save them. He then proceeded to divide the century and a half which has elapsed since the introduction of the forceps to the present time into three periods: first, from the introduction of the forceps to the discovery of anæsthetics, about a century; secondly, from the discovery of anæsthetics to the introduction of antiseptics, a quarter of a century; and, thirdly, from the general introduction of antiseptics in midwifery practice to the present time, very nearly a quarter of a century. "Now," continued Dr. Sinclair, "if we consider our present position, we have much to congratulate ourselves upon, and yet we may fairly ask if there is not much room for improvement in the use which we make of our resources. Is not one of the most remarkable things in the history of medical science during the last quarter of a century the extraordinary development of gynæcology in its surgical aspect? Gynæcology flourishes and has become largely surgical—so largely surgical that Sir W. O. Priestley, my predecessor of two years ago in the position which I occupy to-day, addressed to the Obstetrical Section a warning and a remonstrance on the too free application of surgical methods to gynæcology. Midwifery has during the same period become also largely surgical—too surgical—and a thesis which I shall endeavour to maintain to-day is that gynæcology has become so largely surgical as the direct result of surgical interference in midwifery practice; the accoucheurs are the providers of material for the gynæcologists. I fully appreciate the admirable work done during that time by gynæcological surgeons in dealing with the new growths of the sexual organs, and I do not decry it; but for the material of his ordinary daily labour the gynæcologist has to look to the accoucheur. Last year Dr. Cullingworth did a good service to the medical profession by addressing the Obstetrical Society of London on the subject of the undiminished childbed mortality in England in spite of our advantages and improved methods of practice. But in addition to the avoidable childbed mortality, there is the very serious question of childbed morbidity, which I maintain and repeat is largely owing to the prevalence of surgical methods in the practice of midwifery. The term 'surgical' is employed here with almost exclusive reference to the use of midwifery forceps. It was said by Baudelocque that the midwifery forceps was the most useful surgical instrument ever invented, and with that strong and unqualified opinion we are all more or less in agreement. But, like all our powerful remedies, the forceps must be used with circumspection, else disastrous consequences must ensue." Dr. Sinclair then gave an interesting *résumé* of the practice of Smellie and Robert Collins, and continued: "The typical injury of parturition during the first period—i.e., before the discovery of anæsthetics—was vesico-vaginal fistula, but there can be no doubt that the not infrequent use of perforating instruments and the crotchet produced bruises and lacerations which, in pre-antiseptic days, must have conduced considerably to the maternal mortality. The mistaken practice also of 'stretching the birth,' which I am afraid is by no means a thing of the past, was so prevalent that it must have done infinite injury. By causing minute necroses or lowering the vitality of the tissues it must have opened up the way to bacterial invasion with all its consequences. Laceration of the perineum must have been occasionally inevitable in former generations as in our time. But special attention appears to have been given to its prevention. Denman, indeed, refers to its prevention as 'the principal object of our attention in natural labours.'" The second period, commencing with the discovery of anæsthetics and ending with the general introduction of antiseptics, Dr. Sinclair dismissed somewhat more briefly. "The introduction of anæsthesia did not," he considered, "lead to any great improvement in the practice of obstetrics. The medical practitioner could now relieve the patient from the worst pangs of parturition, and therefore could well afford to wait in normal labour for completion by the natural process. But it was soon found that the production of anæsthesia was not all gain. It was found that the prolonged administration of chloroform brought on inertia of the uterus, tedious labour, and post-partum hæmorrhage. The tediousness of the labour made the 'gossips uneasy,' and the most conservative of practitioners was too often driven to the application of the forceps. In fact, the consciousness that the final pangs of labour and the acute suffering which would otherwise be produced by the application of the forceps could be entirely relieved by the administration of an anæsthetic had for its practical effect a great extension of operative midwifery. Lacerations of the perineum became much more frequent than under the old practice of delay, and as it was quite unusual to suture these lacerations, as is now the universal practice, incontinence of urine owing to vaginal sloughing was replaced by incontinence of fæces resulting from complete laceration of the perineum. The lacerations of the cervix and vagina and their relation to parametritis were either unobserved or not understood until Emmet taught the medical world their importance. Just as the practice of the first period made material for the special beneficent work of Marion Sims, the abuses of the second period provided the opportunities which Emmet had the genius to recognise and to use. The advent of the third period—that of anæsthetics combined with antiseptics—dates from 1870 to 1873, or somewhat later. About that time began those triumphs of abdominal and pelvic surgery applied to the diseases of women, of which men of our special branches of medicine are so justly proud. The

operations in general surgery also took on a new phase, and our students, accustomed to witness in the hospital the audacity with which the modern surgeon, depending upon anæsthetics and antiseptics, could deal with new growths and surgical injuries, were influenced, perhaps almost unconsciously by what they had seen of operative surgery, into applying its methods to midwifery practice. There has been little of precept and example to counteract this tendency. Our students in the medical schools are not taught obstetrics and gynæcology in a reasonably practical way; while, on the other hand, they apply themselves to surgery, theory and practice, from the time they pass the entrance examination until they graduate. They learn surgery which they will never practise, and they will practise midwifery which they have never learned." Dr. Sinclair then gave the following picture of the young practitioner. "The young practitioner sees a woman suffering under the pangs of labour; he can relieve these by anæsthetics: normal labour is a process which requires time; the practitioner does not like waiting, and he has appliances by which he can abridge the process of normal labour: he knows that he may produce injuries, but these are in his eyes trifling compared with the injuries which he has been accustomed to see treated successfully by the surgeon with the aid of antiseptic appliances, and a laceration can always be sutured if it appears to be of sufficient importance. Why, therefore, should he permit suffering to his patient and waste his own time? He does not know enough of gynæcological practice to be impressed with the importance of a laceration of the cervix or vagina or a dislocation of the uterus—that is to say, of the remoter consequences of his well-meant interference. More than that, although he may have attended the statutory number of labours required by his college or university, he has enjoyed few advantages of direct practical instruction and example; he may be unable to diagnose the presentation, so he must trust to force alone; he has seen little or nothing of the puerperal state, so he is hardly in a position to appreciate the risk to his patient or to recognise some of even the immediate effects of operative midwifery." The next step in Dr. Sinclair's argument was to allow that before passing judgment on this kind of practice as to whether it is reasonable, or unavoidable, or praiseworthy, or the reverse of all that, we must find a criterion of good practice. To which end he read to the section the figures showing the details of two years of the practice of the Manchester Maternity Hospital. From these figures it was evident that the forceps deliveries among in-patients were in a comparatively high proportion, but the hospital beds are understood to be retained for cases of difficulty and danger; hence a large proportion of the women admitted have a history of difficult or operative labour in the past. The proportion of forceps deliveries among these in-patients was almost exactly 9 per cent., and no woman died after the use of the forceps. The proportion of forceps deliveries among the home patients in the charge of the midwives might be considered the normal requirements of the community. "Now, in 2049 home-patient deliveries," said Dr. Sinclair, "the forceps had to be applied by the obstetric physicians twenty-nine times; that is as nearly as possible 1·4 per cent. I have already called your attention to the fact that within the same area of population, but among the class of people who can afford to pay for private medical attendance, the proportion of forceps deliveries is 25 to 30 per cent. Such a striking contrast surely supplies food for reflection and calls for explanation." Dr. Sinclair concluded by quoting many continental figures in support of his proposition that delivery by forceps is nowadays far too common.

The Vomiting of Pregnancy.

On the previous day, Wednesday, Sept. 1st, a discussion took place on this subject, introduced by Dr. J. A. TEMPLE, (Toronto), in which Dr. W. GARDNER and Dr. J. C. CAMERON (Montreal), Dr. R. B. MAURY (Memphis), Dr. SKENE and Dr. C. JEWETT (Brooklyn), and Dr. H. T. HANKS (New York) joined.

Dr. GILES showed for Dr. ROBERT BARNES (London) a Drawing to illustrate Barnes's Boundary Line in Placenta Prævia, and Dr. BERRY HART (Edinburgh) and Dr. WRIGHT (Toronto) discussed the matter. — Dr. JOHN CAMPBELL (Belfast) read a paper on Labour Complicated by Abnormalities of the Cervix Uteri and Vagina, and the subject was continued by Dr. MURRAY (New York), Dr. HOWARD KELLY (Baltimore), and Dr. JEWETT (Brooklyn).—Dr. W. C LUSK (New York) gave a Contribution to the Study of the First Stage of Labour from a Frozen Section, illustrated by drawings, photographs, and plaster casts. — Dr. BERRY HART complimented Dr. Lusk on his excellent piece of work. — Dr. W. GARDNER showed a specimen of Vesical Calculi removed from the Bladder in a case of Procidentia.

PHARMACOLOGY AND THERAPEUTICS.

The Presidential Address in this section was delivered by Dr. D. J. LEECH, Professor of Materia Medica and Therapeutics at the Owens College, Victoria University, Manchester, who took as his subject:

Past and Present Views as to the Actions of Medicines.

Dr. Leech opened his address with a summary of the views held during the last sixty years as to the action of medicines, quoting Pereira, Headland, Brodie, and others. He then gave a sketch of the progress of pharmacology during the same period, continuing as follows: "The knowledge of the method in which drugs remove the cause of disease and counteract its results did, indeed, greatly increase; so, too, did our power of lessening suffering; but something more was required. We could not combat the evils produced by disease at all essential points of attack, and our power to stay its progress was therefore very limited. And no way was made in the discovery of substances capable of generally antagonising the functional changes and pathological conditions characteristic of special forms of disease. No drugs were found acting as mercury does in syphilis, and the method of action of this and also of some of the best known of our remedies has remained undetermined. But in very recent times, owing to the investigations of pathologists and physiologists, light has come. The discoveries made concerning the curative influence of certain animal substances such as thyroid gland and concerning toxins and antitoxins, mark a new departure in therapeutics. How do they affect existing views concerning the action and uses of drugs? Strong views have recently been expressed on this point. Dr. Saundby, for example, considers that though the recent discoveries with regard to pathogenetic organisms and their products open up to us an altogether new prospect in therapeutics, the system of pharmacology is about to pass into the limbo of the forgotten, and Professor Behring, of Marburg, thinks that in the light of serum treatment all our older views must vanish. Cellular pathology, he says, has become unfruitful for therapeutics; it is vain to treat the organs which are affected. Serum treatment, if we may judge from the *résumé* of his paper which was read at the recent 'Congress für Innere Medicin' at Berlin, is alone efficient. If Behring's view as to its nature is correct its study is almost outside the boundaries of pharmacology, for he holds that antitoxin is not a definite chemical compound, but a quality, inherent in certain albuminous substances as magnetism is in the magnetic oxide of iron. If antitoxins are powers, not substances, we are almost carried into a new world in which pharmacology, as at present understood, has no place. There seems little probability that the view of the enthusiastic supporter of serum treatment has any real foundation, and as I do not know the reasoning which has led to its adoption I shall not attempt to controvert it. The toxins disturb the functions of the various organs like other pharmacological agents. They have a definite physiological action, and there is no reason for believing that they act on tissues in a manner fundamentally different from other medical agents. They have, indeed, a more marked power than most drugs in producing immunity. It is impossible to say whether in this respect they act like ordinary drugs, but it can hardly be doubted that they produce their effects in a similar, if not in the same way. Another property which toxins have has not been shown to be common to the medical agents hitherto employed. They lead to the production of antitoxins, but how we know not. Protoplasm has the power of altering substances which come in contact with it, and it is possible to imagine that by some subtle chemical influence the toxin is converted into a substance directly antagonistic to it in physiological properties. But it seems far more probable that antitoxins are produced by the protoplasm itself under the influence which the toxin exerts upon it. It is shown that the serum of blood does contain a bactericidal substance, and many years ago Hankin pointed out that the blood of certain animals normally contains what he calls a 'defensive proteid,' to which Buchner subsequently gave the name of 'Alexin,' and which practically is an antitoxin. If cell protoplasm has the property of thus

normally producing such defensive material it is not difficult to imagine that under the influence of certain toxins it may produce special antitoxins. Although we have no proof, so far as I am aware, that any of the older used drugs lead to the production of antitoxins, there is reason to believe that certain vegetable albuminoids are capable of doing so. Ehrlich states that the toxalbumins, ricin and abrin, derived respectively from castor-oil and jequirity seeds, not only cause immunity, but the formation of an antitoxin in the blood which protects from the poisonous influence of these two substances. The methods in which antitoxins act are as yet shrouded in obscurity. They may be to a certain extent destructive to the organisms giving rise to disease, as quinine probably is in ague, but they seem to produce their special effects by antagonising the toxins these organisms produce, and they differ from the older drugs in exercising a wider and more rapid influence. They seem to antagonise the toxins at once at all essential points instead of counteracting their effects at one or two points only. There is good reason for believing that they do not neutralise each other as an acid neutralises an alkali. At least Calmette has shown that neutralisation does not obtain in the venins and antivenins the action of which very closely resembles the toxins and antitoxins, for he finds that if a mixture of venin and antivenin, which is non-toxic because of the antagonistic influence of the two substances, be exposed to a temperature of 68° F. the power of the antivenin is destroyed, but not that of the venin, which now can exert its toxic influence. It seems probable that the antitoxin acts on the molecules of the protoplasm in some way and prevents the toxin exerting its ordinary influences. It is the combination of pharmacology with therapeutics which gives the value to the work of this section, and we shall have several important discussions which will probably illustrate this. That on the treatment of syphilis will show the difficulties we labour under from defective knowledge of disease and drug action, but it will show, too, how patient observation, long continued, may to some extent make up for such defective knowledge. For nearly 300 years the use of mercury in syphilis has been debated, but because the nature of syphilis and the action of mercury were quite unknown the utmost divergence of opinion existed in earlier times as to its use. On both points some knowledge has been gained, and differences in view are not now so wide as heretofore, yet we shall probably find that on some points observations have led to very different results. The discussion of the treatment of insomnia will illustrate our indebtedness to the combination of pharmacological and chemical knowledge, since for most of our new hypnotics we are indebted to this joint working. The third subject for discussion—diuretics—has in recent years been illumined by pharmacological investigations, which though they may not have cast fresh light on the effects and importance of increasing kidney secretion, in certain forms of disease have nevertheless made more clear the manner in which diuresis may be brought about."

The Treatment of Insomnia.

Dr. C. K. CLARKE (Kingston, Ontario) opened a discussion on this subject. He first treated of the physiology of sleep. Cerebral anæmia, vascular dilatation of the skin, and lessened blood pressure might be considered as common conditions in sleep. Séo's classification of sleeplessness was cerebral, spinal, and psychic. Want of sleep killed more quickly than starvation. In treatment let drugs remain to the last. Try the warm bath, 104° F., and cold to the head. Patients often fall asleep in the bath. Hot milk and the sun bath were good, also hot ale at night. In the insomnia of neurasthenics, strychnine and digitalis were often effective. In sleeplessness from pain he considered morphia almost unavoidable.

Dr. R. W. WILCOX (New York), Dr. A. MCPHEDRAN (Toronto), and Dr. E. T. EDES (Jamaica Plains) continued the discussion.

Professor RICHET (Paris) discoursed on hypnotics in general and chloralose in particular. He made use of the blackboard to impress some of his points. He considered that changed blood pressure was not the basis of sleep production. In the study of chloralose he had found that this body did not produce collapse, but rather a strychninisation of the cord; the brain might be congested. The drug might be used in heart cases up to six grains. Slight convulsive jerks might occur, but there was no danger. In one case a patient, a woman, wilfully took sixty grains, there was deep sleep and starting like a strychnine case. In thirty-six hours there was complete recovery. Professor Richet used chloralose by preference.

Dr. DONALD MACALISTER (Cambridge) related his experience among students. The causes here were principally overwork and anxiety about examinations. He eschewed hypnotics, and succeeded in most cases. He first advised a cold bath for either sex, then walking about the bedroom naked till quite cold, or failing in this, next night put on a wet nightshirt, and over it the "blazer." He also suggested reclining in a hammock, thus exposing to the air the lower half of the reclining body. In the case of overworked students too tired to sleep strychnine might be tried, hot coffee also. Magnesium sulphate was an ancient but trusted ally in therapy. As a *dernier ressort* he recommended chloralamide, but it should be given without the patient knowing what he is taking.

Dr. ROBERT SAUNDBY (Birmingham) believed chloral to be the most certain pure hypnotic. The dangers had been exaggerated. Sulphonal had been used to an enormous extent in England, and yet hæmatoporphyrinuria was almost unknown.

Dr. J. Y. A. CAMPBELL (Carlisle) spoke of insomnia in the sane and in the insane. From long asylum experience he found chloral the surest sleep producer. He thought well of paraldehyde. The great thing was to secure sufficient outdoor exercise and suitable diet. In the sane the great desiderata were change of air and change of scene. He was doubtful of the great danger of chloral, as he had seen 8 drachms used at one time without evil effect, and had given as much as 4 drachms.

Dr. W. WHITLA (Belfast) approved of leaving drugs to the last. Millions of doses of sulphonal had been administered with very few accidents. Chloral he considered to be dangerous and the addition of digitalis useless. He was favourable to alcohol. From two to two and a half ounces of proof-spirit with hot water at night was enough. So small a matter as an uncomfortable pillow might cause a bad night.

Dr. EDWIN RAYNER (Stockport) said that there were idiosyncrasies and therefore no general rules. He liked small doses, as 10 grains of chloral, or 10 grains of sulphonal combined with 5 grains of phenacetine.

The PRESIDENT of the section summed up the discussion of the first day's session, noting that there was a unanimity of opinion that every case must be thoroughly studied for the discovery of abnormal conditions, the presence of which must be known before a reasonable therapy could be applied.

Dr. C. R. MARSHALL (Ferndale) had a fine display of Indian hemp and its principles on the table for inspection.

PATHOLOGY AND BACTERIOLOGY.

The Presidential Address in the Section of Pathology was delivered by Mr. W. WATSON CHEYNE, Professor of Surgery in King's College, London, who took as his subject

The Progress and Results of Pathological Work.

"On such an occasion as this," said Mr. Watson Cheyne, "one is naturally tempted to look back on the history of pathology during the last sixty years, but I hope that you will not expect me to follow the fashion in this respect. To trace the history of pathology during the last sixty years would be to follow the science practically from its commencement and to go back to a state of matters which it is almost impossible for us now to realise. To-day it is the etiological side of pathology, so to speak, which occupies our attention, and deservedly so, for, so far as practical results in the treatment of disease are concerned, the knowledge of the changes produced is of comparatively minor importance as compared with that of the reason why they are set up and how they take place. The more accurately we can trace the etiological factors in disease and the subsequent course of events the more likely are we to arrive at a rational method of treatment. The most striking and important advance has been the growth of the great science of bacteriology, a science which has not only led to most important practical results, but has also thrown a flood of light on the processes which go on in the body as a whole and has stimulated research in other directions not immediately associated with it. It is difficult for those who have only taken up the subject of bacteriology comparatively recently to realise the absolute blank which it presented even twenty years ago. When I

became house-surgeon to Lord Lister in 1876 objections of all kinds were urged against the theory on which Listerism was based; some denying the existence of bacteria at all, others maintaining the theory of spontaneous generation; some asserting that organisms were always present in the healthy tissues, others denying that they had anything to do with disease, or that the success of the antiseptic principle depended in any way on the exclusion of micro-organisms from wounds. A great advance which followed soon afterwards was the remarkable research by Lord Lister on the bacterium lactis, in which he devised a method of separating bacteria by fractional cultivation, which resulted in the separation of the bacterium which causes lactic fermentation from other organisms. Then came Koch's work on infective diseases of wounds and Metchnikoff's work on phagocytosis, a theory which is not only very fascinating in itself, but which has proved a most suggestive working hypothesis leading to many of the researches which have given bacteriology its present position. In spite, however, of all that has been done many problems still remain unsolved. In the case of tuberculosis, why is it that in one part of the body we have a slow growing lupus disease and in another part, perhaps, of the same body a rapidly developing tuberculosis? The same problem is apparently presented with regard to the bacilli of diphtheria, in that we may have in one case a true diphtheria, in another a membranous rhinitis, while in a third, although the bacilli are present in the throat, the individual may be apparently healthy. Another very remarkable problem is presented by the results which follow free incisions into tuberculous tissue. An incision is made into the abdominal cavity, masses of tuberculous tissue and tubercle are found scattered over the peritoneum, nothing whatever is done, the wound is stitched up, and yet in many cases the patient, who up to that time has been going steadily down hill, begins to pick up, and the disease may come entirely to a standstill. In connexion with the pyogenic organisms also we have many problems. How is it, for example, that after an abscess is opened antiseptically suppuration at once ceases? If instead of opening the abscess antiseptically a poultice be applied, suppuration goes on and may be very profuse. But if it be opened at a time when there is free fluctuation and when it is beginning to point, and if the necessary antiseptic precautions be taken and proper drainage provided, no more pus forms, and yet when the abscess is opened it is found to contain living pyogenic organisms. We can easily understand that the subsidence of the fever and general disturbance is due to diminished absorption of toxic products. But why do not these living pyogenic organisms keep up the suppuration? And why is it that after two or three days one may fail to obtain any cultivations from the serum which escapes from the wound?" Mr. Watson Cheyne here discussed the pathology of inflammation, arguing that inflammation and healing are two different, and, indeed, to some extent antagonistic, processes, and that although in every wound the tissues in resenting the injury show the early stage of inflammation, yet if no organisms be admitted the inflammatory phenomena soon pass off, and where there is destruction of tissue a second process—namely, that of repair—begins. He continued: "A very remarkable thing in connexion with these advances, especially in experimental pathology, is the enormous direct practical benefit which has already resulted to the human race; and it is sufficient answer to the antivivisectionists who oppose the use of intelligence and observation and experiment to point to the saving of human life and the relief of suffering which has taken place in the last few years. Since Pasteur's experiments on spontaneous generation were published, only thirty-six years have elapsed, and during that time remarkable results have been attained in treatment as the result of experimental pathology. The practical results already obtained affect diagnosis, prophylaxis, and treatment. The diagnosis of many parasitic diseases has now been rendered certain and easy by searching for the causal organism, and I need only instance such diseases as diphtheria, tuberculosis, malaria, anthrax, gonorrhœa, &c. The greatest of all the advances, because so wide-reaching, has been in the prophylaxis of disease, especially in the prevention of septic disease after operations, as brought about by the discoveries of Lord Lister. By these discoveries the occurrence of sepsis in wounds made through unbroken skin is prevented, and the chances of general sepsis in septic wounds are much diminished, and numerous lives are saved, not only in this way, but also by the fact that the Listerian treatment permits the performance of many life-saving operations which could not otherwise be attempted. In other cases, also, prophylaxis is of great value, as in diphtheria and in Pasteur's treatment of rabies, which may properly be grouped as a prophylactic rather than a curative treatment. Lastly, I may refer to advances in the cure of disease. In the case of diphtheria there can be no question that the antitoxin is a most potent curative agent, and that, used in the early stages, it is almost certain to cut short the disease. As regards tetanus, the evidence in the case of animals is absolutely convincing, but in patients suffering from the disease the effect is not certain, probably because we have to do with an acute illness which runs its course before the serum has had time to act. The same may also be the case with the antistreptococcic serum, although I have great doubts of its value as a curative agent. In other instances, such as plague and snake-bite, we may apparently look forward to a cure; while researches are being carried on with regard to pneumonia which may lead to valuable results; nor must I forget to mention Pasteur's system of inoculating cattle against anthrax. What are we to say about the new tuberculin? We all know how careful an observer Koch is, and the fact that he looks on it as a valuable remedy is to my mind sufficient to make it necessary to give it a careful and hopeful trial. I must say that I have always been favourably inclined to the old tuberculin, and have regarded it in relation to phthisis like iodide of potassium in relation to syphilis, and, had I been a physician, I do not think I should have abandoned it in the hurried manner in which it was thrown aside. I might enumerate many other instances of direct benefit from pathological research, such as the advances in the treatment of tuberculous diseases of bones and joints as the result of better knowledge of the nature and distribution of the disease, the treatment of appendicitis, and the investigations on peritonitis and diseases of the appendix, the more complete operations for cancer following fuller study of the mode of spread of the disease, and so on; but I have said enough to show the great importance and value of pathological research. Such results must encourage us to go on working with all our might and without ceasing, bearing in mind that many are suffering and dying every day who might be saved if only we had just a little more knowledge of the workings of the body and the processes of disease."

Dr. ALEXIS THOMSON (Edinburgh) then read a paper, illustrated by a series of slides, upon Epithelioma of the Penis.—The PRESIDENT of the section read three papers—one for Professor GOLDMAN upon Early Infection of Blood-vessels in Carcinoma and Sarcoma, one for Dr. KANTHACK on Cancer of the Testicle, and one for Dr. STILES on the Evolution of Cancer Bodies.—Professor BRYCE read a paper for Dr. PATRICK MANSON on a New Species of Filaria Sanguinis Hominis Nocturna.—Dr. IRA VAN GIESON then read an important paper on

Hæmatomyelopore.

This he described as a condition of the spinal cord following on trauma, which had to be distinguished clinically as well as pathologically from syringomyelia. Three such cases were recorded—one spontaneous, the others from trauma. The condition, which he regarded as a newly defined one, was characterised by sharp-cut canalisation of the spinal cord, usually in the posterior horns. The amount of degeneration and cavitation was out of proportion to the traces of blood effused. His experiments in injecting fluids into the cord proved that the separation of fibres always took place in a vertical direction, and usually in the grey matter. Such conditions, he thought, might be differentiated clinically from syringomyelia by the history of trauma and the rapid onset of symptoms, usually with a rapidly fatal result.

PSYCHOLOGY.

The Presidential Address in this section was delivered by Dr. R. M. BUCKE, medical superintendent of the Insane Asylum, London, Ontario, Canada, the subject being:

Mental Evolution in Man.

"Psychology," he said, "ought to be the most interesting of all the sciences, and as a matter of fact it is so, though it has been greatly discredited by the imperfection of the method by which it has until very lately been studied. That imperfection is so great that it would

hardly be an exaggeration to assert that nearly all the study and thought expended upon it down to the beginning of our own age has been fruitless and as good as wasted, except inasmuch as it has at last made clear the impassability of the route men have sought to follow—the route, namely, of introspection. As man's bodily life rests upon and grows from that of countless prehuman ancestors; as man includes in his structure the heart of the reptile, the gills of the fish, as well as the forms in outline of innumerable still lower races, so is his so-called human mind rooted in the senses and instincts of all his ancestral species; and not only so, but these senses and instincts still live in him, making up, indeed, far the larger part of his current every-day life; while his higher psychical life is merely the outgrowth and flower of them. In the growth of mind, whether that of the race or of an individual, we recognise two distinct processes: first, the very gradual evolution to, or toward, perfection of faculties that have already come into existence; and, secondly, the springing into existence (as new branches start from a growing tree) of faculties which had previously no existence. For it is clear to the least thoughtful student that no faculty (as no organ) came into mature and perfect life at once. Hearing and sight, we are told, developed by slow degrees from the sense of touch; and in the region of the intellect conceptual life was born from ages of receptual, and that from millenniums of perceptual. Let us now suppose mind growing for millions of years in the way set forth. It begins, we will say, as mere excitability; to that after a long time is added what may be called discrimination, or choice and rejection of, for instance, different kinds of food. After another long interval of almost infinitely slow advance sensation appears, and with it the capacity of pleasure and of pain; then, still later, memory; by-and-by recognition of offspring; and successively thereafter arise reason, recognition of individuals, and communication of ideas. Concurrently with these intellectual faculties certain moral functions, such as fear, surprise, jealousy, anger, affection, play, sympathy, emulation, pride, resentment, grief, hate, revenge, shame, remorse, and a sense of the ludicrous have also arisen in the nascent mind. We have reached now the mental plane of the higher animals, which is equally that of the human being at about two years of age. Then occurs in the child the mental expansion which separates man from the higher mammals—for something like a year the child mind steadily grows from the status of the latter to the status of the human mind. This year in the individual, during which it walks erect, but possesses a receptual intelligence only not having yet the power of forming either concepts or true words, represents in the race the age of *alalus homo*, the period of perhaps a hundred thousand years, during which our ancestors walked erect, but not having self-consciousness had no true language. At the average age of three years in the individual self-consciousness is born, and the infant, from the point of view of psychology, has become a human being. But we all know that after the attainment of the distinctively human faculty, self-consciousness, the child has still much to acquire both in the way of expansion of already possessed faculties and in the acquisition of new ones before it is mentally a mature man. Of the numerous faculties it still has to acquire I shall only mention here the colour sense, the sense of fragrance, the human moral nature, and the musical sense. A consideration of these four and of self-consciousness will occupy the short time allotted me to-day. Simple consciousness makes its appearance in the human infant at the age of a few days; it is absolutely universal in the human race; it dates back certainly to the earliest mammals, and probably much earlier; it is only lost in deep sleep and coma; it is present in all dreams. Shame is said to be born in the human infant at the age of fifteen months; it is a pre-human faculty, being found in the dog and in apes, and undoubtedly existed in our pre-human ancestry; it is almost universal in the race, being only absent in the lowest idiots; it is very common in dreams. Self-consciousness makes its appearance in the child at the average age of three years; it is not present in any species but the human; it is, in fact, that faculty the possession of which by an individual constitutes him a man. It is not universal in our race, being absent in all true idiots; that is, it is permanently absent in about one in each thousand human beings born into the world. In our ancestry it dates back to the first true man; a race, we are told, unclothed, walking erect, gregarious, without a true language, to a limited extent tool-using, destitute of marriage, government, or of any institution, animal, but in virtue of its highly developed receptual intelligence, king of animals, which developed self-consciousness, and by that fact became man. It is impossible to say how long ago it was when this event occurred, but it could not have been less than several hundred thousand years. This faculty is lost much more easily and frequently than is simple consciousness. We lose it in coma and also often in the delirium of fever; in certain forms of insanity, as in mania, it is often lost for weeks, even months at a time; and, lastly, it is never present in dreams. The faculty of colour sense appears in the individual at the average age of about five years. It is absent in one adult human being out of every forty-seven; it appeared in our ancestors, as Geiger has shown from linguistic palæontology, in the Aryan period, probably less than thirty thousand years ago. It is seldom present in dreams; and when it does occur, that is, when any colour is seen in a dream, it is generally that colour which for good reasons was first perceived by man—namely, red. It is thought that the sense of fragrance was acquired by the race later than the colour sense; it is also acquired later by the individual. The human moral nature belongs to a much later stage of evolution than any of the faculties so far considered. It does not make its appearance in the individual before the average age of fifteen years. It is congenitally and permanently absent in at least forty human beings out of every thousand. It would seem clear, as stated already, from a consideration of our historic ancestors, from the fact that this faculty rapidly fades out as we ascend into the past, that it cannot have existed in the race more than 10,000 years at the most. It is far more unstable in the individual than the older faculties, such as self-consciousness. It is never present in dreams. Finally, the musical sense (a faculty which is now in act of being born into the race) does not appear in the individual before the average age of about twenty years. It does not exist in more than half the members of the race. It has existed less, perhaps considerably less, than 5000 years in the race. It is never, or almost never, present in dreams, even in the case of professional musicians." Dr. Bucke here discussed the scheme of mental evolution and the atavistic theory of idiocy and insanity. He continued: "Evolution, as far as we can see, has always gone on, is going on to-day, and will always go on. Our old mental faculties are some of them fading out, others advancing toward greater perfection, and alongside of them new ones are springing up, some of which will, without doubt, be of overshadowing importance in the future. So-called telepathy and clairvoyance seem to be specimens of such nascent faculties. I place in the same class the phenomena of what is often named spiritualism. The labours of the Society for Psychical Research have made it to me plain that these phenomena, as notably in the case of W. Stainton Moses, really exist. To me these are not cases in which outside agents are acting on or through a human being, but are cases in which a given human being has faculties which are not commonly possessed. But of infinitely more importance than telepathy and so-called spiritualism, no matter what explanation we give of these, or what their future is destined to be, is the final fact to be here touched upon. This is that superimposed upon self-consciousness, as is that faculty upon simple consciousness, a third and higher form of consciousness is at present making its appearance in our race. This higher form of consciousness when it appears occurs, as it must, at the full maturity of the individual, at about the age of thirty-five, but almost always between the ages of thirty and forty. There have been occasional cases of it for the last 2000 years, and it is becoming more and more common. In fact, in all respects, as far as observed, it obeys the laws to which every nascent faculty is subject. Many more or less perfect examples of this new faculty exist in the world to-day, and it has been my privilege to know personally, and to have had the opportunity of studying, several men and women who have possessed it. In the course of a few more millenniums there should be born from the present human race a higher type of man possessing this higher consciousness. This new race, as it may well be called, would occupy, as toward us, a position such as that occupied by us toward the simple conscious *alalus homo*. The advent of this higher, better, and happier race would amply justify the long agony of its birth through the countless ages of our past. And it is the first article of my belief,

some of the grounds of which I have endeavoured to lay before you, that a race is in course of evolution."

Dr. G. H. ROHÉ (Sykesville) introduced for discussion the subject of the Etiological Relation of Pelvic Disease to Insanity, upon which many members spoke, among others Dr. R. DEWEY, Dr. D. CLARKE, Dr. J. W. BURGESS, Dr. E. N. BRUSH, Dr. URQUHART, Dr. ALEXANDER, Dr. MEEK, and Dr. SPITZKA.

OPHTHALMOLOGY.

The President of the section, Mr. EDWARD NETTLESHIP, in opening the meeting stated that owing to the large amount of work to be got through his remarks would be very brief. He felt it a great honour to have been chosen to fill the presidential chair of so important a section as that of ophthalmology. The only regret he felt in connexion with the matter was that none of his colleagues from the British Isles had been able to be present.

Antiseptics in Eye Surgery.

Dr. H. NOYES (New York) introduced the subject of antisepsis in eye surgery, and related his experience and his methods in connexion therewith. He stated that all were agreed that antisepsis was essential and he described his method as to preparation for operations as follows:—1. A patient in hospital practice was given a bath, his clothes were cleaned, his head, eyebrows, and eyelashes treated with soap and hot water and then with bichloride. The conjunctival sac was inundated with a solution of boric acid, which he considered was all that was necessary to wash away the mucous coagula. In some cases an occlusive bandage was used for twenty-four hours previously to operation. 2. Instruments were boiled for from five to ten minutes in 4 per cent. carbolic solution and covered with an antiseptic cloth. In using jointed instruments extra care was required. In practice outside the hospital the instruments are boiled before going to the patient and then immersed in alcohol immediately before using. 3. The hands of the operator were cleansed by scrubbing with soap and hot water and powdered borax, particular care being taken as to the nails, after which the hands were immersed in bichloride. 4. Dressings were sterilised by steam and kept in a tight glass jar, and the wound dressed with a bichloride solution, 1 in 3000, for twenty-four hours. He had given up washing out the anterior chamber with iodide of mercury, and questioned if the normal salt solution was not the best. Asepsis was probably better than antisepsis in these cases. In private houses he had sometimes had suppuration take place owing to defective plumbing.

Dr. RANDOLPH (Baltimore) agreed that a neutral solution was the best for the conjunctival sac, as there was much danger from the use of bichloride. He thought that plain boiled water was as good as boric acid. He did not boil the cutting instruments, but immersed them in alcohol and then in sterilised water.

Dr. BULLER (Montreal) stated that he strictly observed antisepsis. In dressing he used the dry boric acid on a moist skin. He did not wash out the anterior chamber as it caused irritation. In cases with chronic eczema he had not had suppuration since using antisepsis.

Dr. JACKSON (Philadelphia) said that bandaging of the eye immediately before operation was bad practice, and that in lacrymal obstructions the trouble could usually be located in the nose. He believed in washing out the anterior chamber.

Dr. FRYER (Kansas City) used a 1 in 6000 sublimate solution in the conjunctival sac. He did not put any dependence upon boric acid.

Dr. MITTENDORF (New York) agreed with Dr. Noyes in nearly every respect, and made an appeal for the much-abused boric acid.

Dr. RYERSON (Toronto) used boric acid and thought that the anterior chamber should not be washed out as a rule, but that some cases demanded it.

Dr. WURDEMANN (Milwaukee) allowed no one but himself or his associate to prepare the solutions and would not operate in a private house unless he had skilled attendance. He had found great results from a new anæsthetic, "holocain," which was antiseptic and had no bad effect on the cornea.

The PRESIDENT of the section gave a short account of the views of his colleagues of the British Isles, and seemed to think that the majority were in favour of asepsis.

LARYNGOLOGY AND OTOLOGY.

The President, Dr. GREVILLE MACDONALD, after a word of welcome, introduced a discussion on

Turbinotomy.

He commented on the increasing frequency of the removal of mucous membrane and portions of the turbinated bones, and in order to give room for subsequent discussion dealt with the following questions:—1. Are these operations done unnecessarily? 2. Are the symptoms relieved or cured? 3. Is harm done to the patient? The operation has been applied for relief of obstruction to respiration from hypertrophies, for the larger of which he prefers the cold snare and for the smaller the cautery. He emphasises the importance of dealing with concealed growths and cavities formed by overhanging hypertrophy of inferior turbinated bones due to structural malformation. With regard to treatment, the most satisfactory he found was paring off to provide a free passage for air and mucus by scissors or snare, and he was not in favour of extensive removals of the secreting gland of the nose, as he designated the inferior turbinated bone, which, by experiments which he cited, was proved to be the moistener of the respired air. In concluding he urged conservative treatment, and was doubtful if the removal of the least bit more than necessary was ever justifiable.

There being several papers on the subject announced to be read they were asked for before the general discussion, and Dr. PERMEWAN read for Mr. CARMALT JONES a paper on Some After-effects of Turbinotomy. This condition was reported to have been relieved in 60 per cent. of the cases, and the deafness to have been much relieved when the tinnitus stopped. Unhealthy posterior parts of turbinated bones kept up naso-pharyngeal and Eustachian catarrh, and surgical treatment offered the additional advantage of easy Eustachian treatment. Many conditions usually due to nasal obstruction or its effects on adjacent organs were reported as much relieved. No deaths or subsequent bad effects had been observed.

Dr. R. P. LINCOLN (New York), in a short paper, gave some of his own experience in turbinotomy, mentioning preliminary antiseptic preparation and the use of cocaine on cotton plugs. His treatment he divided into chemical and surgical, the former for mild grades of hypertrophy, the latter for the removal of erectile and osseous tissue by means of ignipuncture, cold wire snare, scissors, and bone-cutting forceps.

In the discussion Dr. BRYSON DELAVAN (New York) spoke on the benefits of septal treatment, and gave as his principle the gaining of a maximum of relief with a minimum of injury. He spoke against the name "spokeshave," and condemned the removal of turbinals in children, and spoke of the uncommonness of posterior enlargement of the bones.

Dr. JOHN N. MACKENZIE (Baltimore) stated that the removal of the bone or portions of it was rarely if ever done by him except for the removal of growths, and never done in children.

Mr. LENNOX BROWNE did not agree with turbinectomy and thought it was surgery in a hurry. Turbinectomy in a child he considered quite inadvisable. If there was a large turbinated bone he looked for adenoids, and in a reasonable time got improvement after proper treatment. He spoke of an association of asthma and trouble in the middle turbinated bone. He corroborated Bosworth's statement that there was no hypertrophic rhinitis without a spur, having found this to be the case in 80 per cent. of 1000 cases. He defended the name, "spokeshave," saying that we have already our chisels, mallets, saws, &c., borrowed from the carpenter's shop. He found anæmia closely associated with nasal obstruction, and agreed with the President in that he had seen many cases of dry throat following turbinectomy, and mentioned the President's careful work on the physiology of nasal moisture.

Dr. PERMEWAN, Dr. W. H. DALY, Dr. WARDEN, Dr. J. E. ROE, and Dr. R. C. MYLES also spoke.

In summing up the discussion the PRESIDENT stated that the opinion of those present seemed to be averse to Mr. Jones's radical operation for the removal of the inferior turbinated bone. He summarised the opinions expressed as

follows: 1. Complete resection of turbinated bones is almost never called for. 2. Partial removal is only occasionally required, and then of the anterior portion of the inferior turbinated.

Dr. J. H. BRYAN (Washington) then read a paper entitled the Anatomy of the Fronto-Ethmoidal and Fronto-Maxillary region, in which he dealt with the anatomy of these regions with relation to pathological conditions, based on the examination of normal and pathological frozen sections. He quoted two cases in which sinus disease of long standing was not relieved until the remote seat of the trouble in the ethmoidal cells was attacked, the sinus trouble being kept up by constant re-infection.

Dr. E. FLETCHER INGALLS (Chicago) read a paper on the Relation of Nasal Disease to Pulmonary Tuberculosis. This embraced a study of 14 953 cases studied in connexion with diseases of the nose, throat, and chest. Of these, 830 were phthisical cases in which complete examinations of the nasal organs were made. The conclusions arrived at were that nasal catarrh was much more prevalent than pulmonary tuberculosis, and that it was much less frequent in a given number of tuberculous patients than in the same number of healthy persons, demonstrating that instead of predisposing to the pulmonary tuberculosis, nasal catarrh, if it has any effect at all, appeared to prevent it.

Dr. J. N. MACKENZIE, Dr. SHURLEY, and Mr. LENNOX BROWNE also spoke.

ANATOMY AND PHYSIOLOGY.

In this Section the proceedings commenced by a discussion upon—

The Teaching of Anatomy.

The discussion was opened by Professor ALEXANDER MACALISTER (Cambridge), who remarked that the first thing to be remembered in teaching anatomy was that one was training practitioners of medicine, not professional anatomists. The difficulty in reform lay in the fact that teaching was really controlled by examiners. He then passed on to consider (1) the method of teaching, and (2) the amount to be taught. As regards the method, he emphasised the importance of dissecting and thought that every student should dissect the whole body twice, a preliminary knowledge of osteology being insisted upon. He advocated the working of students in couples and the more general use of the lens as an aid in minute dissections. The demonstrator should not dissect for the student, but should conduct catechism classes on the parts which the students were dissecting. Prepared dissections and models should be used with caution lest a diagrammatic view of the body be acquired. Lectures he regarded as the least important method of teaching anatomy, and in lecturing he preferred the practical plan rather than the morphological, although the latter was the more interesting method. He thought it regrettable that anatomical nomenclature had not been brought into line with that of biology. As regards amount, he thought that teaching must be limited, or mental dyspepsia would result. The range of knowledge was increasing, the time devoted to practical anatomy was decreasing. Teaching by schedule would not do. The most practical parts must be given most prominence. For example, a knowledge of minute muscular attachments, bony facets, &c., were of very little practical use. Two branches were underestimated: (1) the anatomy of the lymphatic glands; and (2) minute nervous connexions. Finally, he thought that an understanding was wanting between teachers and examiners in the subject as to the parts to be omitted in order that time might be best utilised.

Dr. SHEPHERD (Montreal) thought that the order of importance of the branches of anatomy was: (1) Osteology; (2) nervous system; and (3) viscera (for physicians). He also emphasised the drawbacks of teaching by specialists and the necessity for practical work. Lectures formed a skeleton and harmonised with practical work. The use of a "subject" at lectures was not of much help. Dissections could be so "good" that things looked abnormal. The application of facts to practice should be pointed out. Students were apt to remember the useless and have no sense of proportion. In his opinion histology should not be a special branch but attached to anatomy or physiology.

Dr. PRIMROSE (Toronto) condemned the practice of demonstrating minute dissections to large classes, and gave a lantern exhibition of a method of showing frozen sections to a class.

Professor MCMURRICH (Ann Arbor) advocated the use of the card system of recording students' knowledge and the result of their work. In lectures morphology should be used as explaining the "why" of things. The method of question and answer should be given prominence.

Professor WISHART (Toronto) emphasised the value of knowing anatomy "in pieces"—i.e., in order to be able to recognise parts of structures. He disapproved of the use of systematic books in the dissecting-room. Dissecting guides should be employed.

Dr. ELDER (Montreal) drew attention to the value of supplementing teaching in surface anatomy on the living subject.

Professor MICHAEL FOSTER (Cambridge) said he had not the honour to be a teacher of anatomy, and therefore spoke with hesitation, but as regards the relation of anatomy to physiology he thought one could try to teach too much of the latter, but not of the former. A medical man ought to be able to visualise the whole human frame. He thought that the teaching of anatomy should be progressive throughout a medical course. In this way it would not interfere with other subjects.

The discussion was continued by Professor MILLS (Montreal) and Dr. A. D. WALLER (London), the President of the Section.

Professor MCMURRICH presented a note on the Ganglionic Enlargement on the Posterior Interosseous Nerve of the Arm, and suggested that the nerve orginally extended to the digits. He drew attention to the presence of sensory nerve-endings in the ganglion.—Professor HUBER (Ann Arbor) described his Methods of Staining and Preparation in the Study of the Sympathetic Ganglion, and described the character of the cells and fibres and the mode of ending of the latter. He described the variations found in different animals. He said that the sympathetic neuron was always the terminal neuron in a neuronic chain.—Dr. PRIMROSE demonstrated a specimen of Uterus Masculinus, and made remarks on previous cases and its relationship to hermaphroditism.—Professor W. H. THOMPSON (Belfast) read a paper on the Degenerations resulting from Destruction of Sensory Areas of the Cortex, and showed lantern slides.—A beautiful demonstration illustrating the Histology of the Parathyroid Gland was given by Dr. WELSH (Edinburgh).

DERMATOLOGY.

The Presidential Address was delivered by Mr. MALCOLM MORRIS, surgeon to the Skin Department, St. Mary's Hospital, London, on

The Rise and Progress of Dermatology.

"A review of the progress that has been made in the knowledge of skin diseases is," said Mr. Morris, "appropriate at the present time, since what I take leave to call the centenary of the birth of scientific dermatology is not long past. In 1790 the Medical Society of London awarded the Fothergillian gold medal to Robert Willan, who had some time before submitted to it the outline of his plan for the arrangement and description of cutaneous diseases. Willan may justly be called the creator of dermatology, but he was not the first who wrote on skin disease. As our terminology bears witness, the Greeks gave a good deal of attention to the subject. Hippocrates, Celsus, Galen, Paul of Ægina, and after them the Arabians, described various affections of the integument. The first treatise professedly devoted to diseases of the skin was that of Hieronymus Mercurials of Venice, which was published in 1572 under the title, *De Morbis Cutaneis et de Omnibus Corporis Excrementis;* the author had, however, nothing to teach beyond what he found in the ancient writers. At the beginning of the nineteenth century it could be said with perfect truth that little improvement had been made in the subject at large since the days of Avicenna. In 1808 there appeared the first volume of Willan's treatise on Cutaneous Diseases, a great work which its author did not live to complete. Ten years before he had given to the world a slender volume dealing with a particular class of lesions of the skin. It is not, however, Willans'

classification that constitutes his chief title to be regarded as the founder of dermatology. His judicious selection and accurate definition of terms, his astonishingly faithful word-pictures of the appearances of disease drawn directly from Nature, and made more vivid but scarcely more graphic by the coloured engravings with which he supplemented his descriptions, and his rational methods of treatment, were all his own. It was his teachings that transformed a confused jumble of folklore as to 'tetters,' wet and dry, and of figments of the medical imagination embodied in words of learned sound but little meaning into a science, rudimentary, indeed, but grounded on a solid foundation of observed fact. Willan's work is, therefore, rightly looked upon as the true starting point in the history of dermatology. Willan died before he could complete his work; but, fortunately, he left behind a disciple worthy to wear his mantle. This was Thomas Bateman, who had been in constant intercourse with him for many years, and who was thoroughly acquainted, not only with the teaching, but with the spirit of his 'learned preceptor.' Bateman completed Willan's unfinished 'Delineations of Cutaneous Diseases,' and published a 'Practical Synopsis of Cutaneous Diseases,' which did far more to make his master's work known than Willan's own unwieldy and incomplete book. It is hardly too much to say that without Bateman Willan might have been forgotten. Bateman, however, was not a mere expositor; he was a man of truly scientific mind, and would doubtless have added largely to knowledge had not he, too, been cut off prematurely." Mr. Morris here described the dermatological work of Anthony Todd Thomson, Erasmus Wilson, and referred to Jonathan Hutchinson. He continued: "In France a school of dermatology arose independently in the early years of the century. In 1808 Alibert published his 'Description des Maladies de la Peau observées à l'Hôpital Saint Louis,' which he followed up two years later by a 'Traité Théorique et Pratique des Maladies de la Peau,' and several other works. The most valuable part of his publications was the illustrations; his writings only added to the darkness in which the whole subject of diseases of the skin was then enshrouded. His terminology was to the last degree confusing, his classification arbitrary, his descriptions often fanciful. Yet he contributed to the advance of knowledge by directing the attention of more scientifically-minded workers to the subject. Among these was Biett, who adopted Willan's classification with some modifications, and introduced it into France. Among the leaders of the French school who followed Biett were Cazenave, Gilbert, Devergie, and Bazin, all of whom did something to advance the knowledge of skin diseases, though they were apt to let themselves be misled by a tendency to erect systems on unsound foundations. In recent years the yoke of the diatheses has been shaken off, and the labours of Hardy, Vidal, Besnier, and Brocq have placed the French school in the forefront of scientific dermatology—a position which, with such men as Darier, Thibierge, and Wickham to take the place of their seniors when they have to fall out of the ranks, it is in no danger of losing. The year 1844 marked the beginning of a new era in the study of diseases of the skin, for it witnessed the first appearance before the scientific world of Ferdinand Hebra. That remarkable man breathed a new life into the dry bones of dermatology, and set it on a path of progress which has already led to great results. Hebra applied to the investigation of skin diseases the pathological teaching of Rokitansky. His work has been carried on by Auspitz, Kaposi, and Neumann in Vienna, by Pick in Prague, Schwimmer in Budapesth, Lewin and Lassar in Berlin, Neisser in Breslau, and many others. If Willan was the creator, Hebra must be acknowledged as the greatest among the reformers of dermatology. This glory must be his in spite of the fact that his classification in its leading features had been anticipated by Rayer. Hebra, however, worked it out so fully as to make it his own; and his classification can never be superseded till an arrangement based on etiology becomes possible. The history of dermatology in America has been written by Professor J. C. White, of Harvard, and by Professor Louis A. Duhring, of Philadelphia, from whom all that can here be said on the subject is taken. Bateman's 'Synopsis' was republished at Philadelphia in 1818, a second edition being issued in 1824, and a translation of the work of Cazenave and Schedel appeared in the same city in 1829, a second edition being published in 1832. In 1845 appeared the first American work on dermatology; it was entitled 'A Synopsis of the Symptoms, Diagnosis, and Treatment of the more Common and Important Diseases of the Skin,' and its author was N. Worcester, Professor of Physical Diagnosis and General Pathology in the Medical School of Cleveland. The book is described by Duhring as being little more than a compilation from the works of the French and English dermatologists of the day. Meanwhile other signs of a growing interest in the subject were not wanting. In 1836 an Infirmary for Diseases of the Skin was opened in New York, being the first institution of the kind established in the United States, and lectures on skin diseases were delivered there and afterwards in some of the medical schools of New York between the years 1837 and 1854, by Dr. H. D. Bulkley, father of Dr. L. D. Bulkley, whose name is well known to all dermatologists. As early as 1859 Hebra's teaching was made known in America by Professor James C. White, who, two years later, gave the first course of lectures on diseases of the skin at Harvard. After the Civil War clinical lectureships on the subject were established in several important schools. In 1870 the foundation of the *American Journal of Syphilography and Dermatology* did something to promote the advancement of the knowledge of skin diseases in America, and the establishment of the American Dermatological Association in 1877 gave a powerful impulse in the same direction, which was further aided by the creation of the *Archives of Dermatology*. Yet in 1871 Professor James C. White complained that as yet America had contributed little to dermatology, and that this branch of medicine had hardly then found a place among his countrymen as an acknowledged speciality. Now this reproach has been wiped away, and American dermatology, represented by Duhring, J. C. White, Bulkley, and others, is recognised as being in the van of progress. Each of the three great schools which helped to lay the foundations of modern dermatology had certain marked characteristics. The English was essentially clinical, using classification only as a practical help in diagnosis; it observed. The French systematised, striding somewhat impatiently over facts to get at general formulas, which, though plausible on paper, too often broke down in application. The German was pathological, giving attention mainly to mechanism, and occasionally taking too little heed of the causes setting it in motion. Each school had thus the defects of its qualities, but each played an important part in the development of dermatology, and much of what was good in each still survives in the cutaneous medicine of the present day. Now, dermatology is truly international, the different schools which were formerly as separate states having become fused into one scientific commonwealth."

Mr. Morris here stated that modern research has shown that many conditions which used to be looked upon as distinct affections are really different stages in the evolution of one and the same disease. Syphilis and tuberculosis are found to produce many skin diseases formerly referred to other causes. He continued:

"Another direction in which the etiology of skin diseases has made decided progress is the recognition of the action of parasites. The idea that scabies is due to the irritation set up in the tissues by an animalcule, and ringworm by the growth on the surface of the skin of a vegetable mould, is so familiar to us that it is not easy to realise how recently the truth of these doctrines has been definitely established, and with what incredulity the discoveries were for a long time received. The sarcoptes scabiei had been seen by Avenzoar in the twelfth century, and later by Guy de Chauliac, Ambroise Paré, and others; and in the seventeenth century it was distinctly indicated as being the cause of itch by Bonomo and Cestoni."

It was here remarked that Dr. A. T. Thomson in 1850 denied that the sarcoptes scabiei was the cause of itch, and that he, Cazenave, and Chausit asserted that favus and ringworm were not due to mycoderms. Mr. Morris continued:

"Gibert, who had long been an obstinate recusant, gave in his adhesion to the parasitic doctrine in 1866, but Cazenave never recanted his heresy, and Erasmus Wilson, who, after Cazenave had passed away, stood alone in his refusal to accept the teachings of modern science on the subject, also died an unbeliever. The brilliant researches of M. Sabouraud have recently proved that the disease hitherto known as ringworm includes two, and possibly more, distinct conditions caused by different species of fungi. It has also been shown that the disease may be transmitted from animals—

particularly the horse—to human beings, a fact obviously of the greatest practical importance. During the last few years our ideas as to the action of parasites have undergone expansion. The influence of the great revolution in pathology brought about by the discoveries of Pasteur, Koch, and their disciples has been felt in the sphere of dermatology as in other departments of medicine, and we have learnt to look for the causes of many diseases in the world of the infinitely little which bacteriology has revealed to us. Already lupus, leprosy, carbuncle, glanders, sycosis, furuncle, impetigo contagiosa have been proved to be the result of the mischievous activity of specific micro-organisms. It is practically certain that syphilis has a like origin, although the microbe is not yet discovered, and similar causation is assigned to eczema, psoriasis, alopecia areata, acne, and certain forms of erythema. Quite recently Sabouraud has brought forward evidence which he thinks sufficient to prove that seborrhœa and common baldness are of the bacterial family of diseases. The administration of remedies by hypodermic injection may be mentioned as one of the most promising improvements in constitutional therapeusis; the use of mercury in this way in syphilis is becoming more and more common. The serum treatment has not yet established itself in dermatological practice, but good results from it have been reported in a few cases of syphilis, lupus, leprosy, and one or two other affections. Tuberculin as first prepared by Koch has in my own hands and in those of some other observers proved of distinct use as a preliminary to surgical treatment in lupus. The newer tuberculin gives promise of much greater usefulness, but it is too soon yet to pronounce a definite judgment as to its real efficacy. Thyroid extract has a powerful immediate effect on the integument, but my own experience does not lead me to attach much value to it as a remedy in skin disease, and that opinion is confirmed by the experience of several other dermatologists. The application of the parasitic doctrine to skin diseases has led to the introduction of a large and constantly increasing use of parasiticides; in carbolic acid, boric acid, salicylic acid, resorcin, creolin, thymol, salol, dermatol, ichthyol, chrysarobin, to mention only a few, we have powerful agents that the mid-century dermatologists knew not of. It will be long before a complete classification of diseases of the skin is possible, but this is of no great practical importance. A real stumbling-block, however, is the confusion of terminology that still exists. It would be a very real help to progress if a nomenclature at once simple, precise, and yet descriptive and international could be devised."

Dr. J. T. JACKSON (New York) reported a case of Multiple Idiopathic Pigmented Sarcoma (Kaposi). The patient was a middle-aged male from Nova Scotia, and had the lesions widely distributed over the body. They had undergone involution and much amelioration under treatment by arsenic. A histological examination had been made by Dr. Elliott, who reported that the lesions were of the type of a pigmented angio-sarcoma.

Dr. NEVINS HYDE (Chicago) spoke of a similar case at present under his care in which similar improvement had occurred under arsenical medication. He stated that the clinical course of these cases removed them from the category of sarcoma and necessitated a different description.

Dr. JAMES GALLOWAY (London) remarked on a case which he had observed for nine or ten years under the care of Dr. Stephen Mackenzie. He quite agreed with Dr. Hyde that these cases should be placed in a category distinct from sarcoma. The histological features did not correspond with those of ordinary sarcoma. The cells were degenerate in character, and more closely resembled the cells produced by chronic irritation of connective tissue.

Dr. L. D. BUCKLEY (New York) read a paper on the Non-surgical Treatment of Boils, Carbuncles, and Felons. The speaker treated the subjects under different headings, but advocated the treatment of all the minor forms of these lesions by non-operative methods. For years he had been in the habit of treating such cases by internal medication consisting mainly of sulphate of magnesia and iron, and large doses of freshly prepared sulphide of calcium, and external application of carbolic acid and ergot in the form of ointment. He recommended the renewed careful trial of treatment on these lines, being convinced that more favourable results would be obtained by this means than by the use of the knife.

(To be continued.)

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—**At the College of Medicine, Newcastle-upon-Tyne, in the first examination for the degree of Bachelor of Medicine, the following candidates were satisfied the examiners:—**

OLD REGULATIONS.

Chemistry with Chemical Physics.—Leslie Herbert Walsh, M.R.C.S., L.R.C.P., L.S.A., King's College Hospital.

NEW REGULATIONS.

1. *Elementary Anatomy and Biology, Chemistry, and Physics.—First Class Honours:* Robert Simpson Hindmarch, College of Medicine, Newcastle-upon-Tyne. *Second Class Honours:* Thomas Seymour Coates, Alfred Parkin, Alfred Henry Proctor, and William Robert Davidson Dagliesh, College of Medicine, Newcastle-upon-Tyne.—*Pass List:* Curtis Crispin Adeniyi-Jones, Mary Evelyn De Rusett, James Herries Graham, George Mack, William Athol Murray, Henry Reah, Hermann Heinrich Ruffmann, and Frederick Riddle Scott, College of Medicine, Newcastle-upon-Tyne; and Thomas Young Simpson, Cooke's School of Anatomy.
2. *Chemistry and Physics:* Arthur Hugh Bunting, College of Medicine, Newcastle-upon-Tyne; Arthur John Spiller Brandon, St. Thomas's Hospital; William Sayce Batten, Lætitia Nora Ede, and James Farrage, College of Medicine, Newcastle-upon-Tyne; Chella Mary Hankin, London School of Medicine for Women; Marshall Haver, College of Medicine, Newcastle-upon-Tyne; Guy Hannah Kirby, Mason College, Birmingham; Ernest John Lambert Kendle, B.A., Ernest Edward Norman, College of Medicine, Newcastle-upon-Tyne; Michael Joseph Quirke, Mason College, Birmingham; Monica Lucien Mary Robertson, London School of Medicine for Women; Frank Rowland, Mason College, Birmingham; and Frank Wheler Sime, Guy's Hospital.
3. *Elementary Anatomy and Biology.*—Annie Tombleson Brunyate, London School of Medicine for Women; Henry Wallace Furnivall, University College Hospital, London; James Alfred Giles and Albert Ernest Hodge, College of Medicine, Newcastle-upon-Tyne; Evan Llewellyn Jenkins, Cooke's School of Anatomy; and Archibald Cameron Ney, William Waters Stainthorpe, and Frederick George Wilson, College of Medicine, Newcastle-upon-Tyne.

LITERARY INTELLIGENCE.—**The following works will soon be issued by Messrs. J. & A. Churchill:** A second edition, much enlarged, of "Psilosis or 'Sprue,' its Nature and Treatment," by George Thin, M.D. St. And.; "The Means by which the Temperature of the Body is Maintained in Health and Disease," being the Croonian Lectures for 1897, by W. Hale White, M.D., F.R.C.P. Lond. (reprinted from THE LANCET); and "Economics, Anæsthetics, and Antiseptics in the Practice of Midwifery," by Haydn Brown, L.R.C.P. Edin.

THE NICHOLAS SENN PRIZE MEDAL.—**The Nicholas Senn Prize Medal is a gold medal awarded to the member of the American Medical Association who presents the best essay upon some surgical subject. The competition is confined to those who at the time of entering the competition, as well as at the time of conferring the medal, are members of the association; it will be closed three months before the next annual meeting of the association, and no essays will be received after March 1st, 1898. Competitors must address their essays to Dr. J. McFadden Gaston, Atlanta, Georgia, U.S.A.**

PRESENTATIONS TO MEDICAL MEN.—**On the 7th inst. the members of the St. Helens Medical Society entertained to dinner, in the committee-room of the town hall, Mr. John Robertson, M.D. Edin., of St. Helens, in recognition of his appointment to the medical officership of health of Sheffield. Mr. A. Handyside, of Earlestown, president of the society, occupied the chair. The company comprised officials of the corporation, legal gentlemen, magistrates, and others. The chairman, on behalf of the society, presented Dr. Robertson with a pair of beautiful silver candlesticks and a silver bowl, remarking at the same time on Dr. Robertson's well-known work in St. Helens, as testified by standing monuments of increased sanitary efficiency and hospital improvements.—On the distribution, on the 5th inst., at the Bristol Railway Station, of certificates and medallions to the members of the Great Western Railway Class of the St. John Ambulance Association, Mr. Kisling-bury (district superintendent), in addressing the classes, said the success of the previous classes would no doubt be greatly added to now that the Great Western Railway Company was formed into a centre of its own with H.R.H. Princess Christian as president. This occasion was taken advantage of by the members of the classes and some friends to present Mr. Harry F. Devis, L.R.C.P. Lond., M.R.C.S. Eng., of Bristol, with a gold watch, suitably inscribed, as a mark of appreciation of his instructive lectures on First Aid.**

INTERNATIONAL VEGETARIAN CONGRESS.—During the week a congress has been held under the auspices of the Vegetarian Federal Union, at the Memorial Hall, Farringdon-street. The exhibition in the library, of the same building, of representative products of the vegetable kingdom was opened on the 13th inst. by Lady Gwendolen Herbert and has attracted many visitors. To-day (Saturday) members of the congress will visit Messrs. Carter's trial seed grounds at Mordake and attend the Harvest Festival at, and inspection of, the Oriolet (Vegetarian) Hospital, Loughton, Essex.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held in the Mining and Technical School, Wigan, on Sept. 9th, Mr. C. T. Street, President, being in the chair. Mr. W. J. Orsman, F.C.S., analyst for the county borough of Wigan, gave a lecture on, and a demonstration of, Roentgen Rays. The lecture and demonstration were highly appreciated, and a cordial vote of thanks was passed to Mr. Orsman. A paper on Empyema and its Treatment was read by Dr. W. Cunningham Milroy. A discussion followed, in which the President, Mr. Monks, Mr. Brady, Dr. White, and Mr. France took part. Dr. Milroy replied.

WE have received a circular from the Society for the Protection of Birds, of which the secretary is Mrs. F. E. Lemon, Hillcrest, Redhill, Surrey, commenting upon the wicked and wasteful destruction of birds to gratify the vanity of women. Ostrich feathers are excepted from the ban. In a letter accompanying the circular is quoted an advertisement beginning, "Sea swallows, kittiwakes; wanted, some thousands of these birds ....." This we call deplorable; traffic in birds' feathers for the purpose of ministering to the requirements of "fashion" ought to be placed under some restrictions.

DIPHTHERIA IN LONDON.—The amount of fatal diphtheria in London during the summer holiday season, when school children were free from the close association with their fellows, has varied to a certain extent. The mortality was certainly smaller during the week preceding the re-opening of the schools of the School Board for London. In the week ended July 17th, just prior to the vacation, the deaths numbered 36, or one below the decennial and corrected average for the particular week of the period 1837–96. In the next week, during which the schools broke up, but during which the pupils were under the influences of inter-association, the deaths were 42, being 6 in excess of the corrected decennial average. In the last seven days of July they numbered 41, and were just 1 in excess of the average. The first week of August yielded a total of 42, or exactly the corrected average for the corresponding week of the preceding ten years. The second week of August saw a fall to 38 deaths, a number 3 below the average; and in the succeeding and concluding week of the Board school holidays there was a further fall to 29, as compared with a corrected average of 40 deaths. In the first week of the schools reassembling, ended Aug. 28th, the fall continued, 28 deaths being registered, and the decennial average being 36. In the next and second week of return to school duties, the deaths showed a rise to 35, the corrected average being 34; but last week there was a marked fall to 25, this number being 9 below the corrected average. In the outer ring the deaths registered from diphtheria in the two weeks prior to the summer holidays were 8 and 21 respectively, the Edmonton district claiming 10 of the 29 deaths; in the four holiday weeks, they numbered 15, 10, 12 and 17; and in the three weeks since completed were 4, 4, and last week, 13, Edmonton district claiming 6 of the 21 during the period.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Traité de Chirurgie Clinique et Opératoire. Par A. le Dentu et P. Delbet. Tome Cinquième. 1897.

BAILLIÈRE, TINDALL AND COX, King William-street, Strand, London.

Lawson's Tait's Perineal Operations, and an Essay on Curettage of the Uterus. By W. J. S. McKay, M.B., M.Ch., B.Sc. 1897. Price 3s. 6d.

Hand Atlas Series: Anatomical Atlas of Obstetric Diagnosis and Treatment. By O. Schaeffer, M.D. Illustrated. Vol. III. 1897. Price 12s. 6d.—Atlas and Essentials of Gynæcology. By O. Schaeffer, M.D. Illustrated. Vol. IV. 1897. Price 15s.—Atlas and Essentials of Bacteriology. By Professor K. B. Lehmann and Dr. Rudolf Neumann. Illustrated. Vol. V. Price 12s. 6d.

CHAPMAN AND HALL, London.

English Epigrams and Epitaphs. Selected by Aubrey Stewart. Illustrated. 1897. Price 2s.

CHURCHILL, J. & A., Great Marlborough-street, London.

The Means by which the Temperature of the Body is maintained in Health and Disease, being the Croonian Lectures, June, 1897. By W. Hale White, M.D., F.R.C.P. Reprinted from THE LANCET.

Economics, Anæsthetics, and Antiseptics in the Practice of Midwifery. By Haydn Brown, L.R.C.P., L.R.C.S. Edin.. 1897. Price 2s. 6d.

FANNIN AND CO., Grafton-street, Dublin.

Notes on the Special Hygiene (Physical and Mental) of Childhood and Youth. By Thos. M. Madden, M.D., F.R.C.S.I. 1897.

LEWIN, THOS. AND CO., Castle-street, Berners-street, London, W.

International Clinics. Edited by J. Daland, M.D., Philadelphia, and Others. Seventh Series. 1897-98. Vol. I., 1897. Price 12s. 6d. net.

LEHMANN, J. F., München.

Atlas und Grundriss der Chirurgischen Operationslehre. Von Dr. Otto Zuckerkandl. Band 16. 1897.

Atlas der Gerichtlichen Medizin. Von Professor E. Ritter von Hofmann. Band 17. 1898.

LONGMANS, GREEN AND CO., Paternoster-row, London.

Practical Domestic Hygiene. By J. L. Notter, M.A., M.D., and R. H. Firth, F.R.C.S. 1897. Price 2s. 6d.

NISBET, JAMES AND CO., Berners-street, London, W.

Health in Africa: A Medical Handbook for European Travellers and Residents, embracing a study of malarial fever as it is found in British Central Africa. By D. K. Cross, M.B., C.M., F.R.G.S. With an Introduction by Sir H. Johnston, K.C.B. Illustrated. 1897. Price 3s. 6d.

SCOTT, WALTER, Paternoster-square, London.

The New Psychology. By E. W. Scripture, Ph.D. (Leipzig). Illustrated. 1897. Price 6s.

THE F. A. DAVIS COMPANY, Philadelphia.

Annual of the Universal Medical Sciences and Analytical Index. Edited by C. E. Sajous, M.D. Paris, and others. Illustrated. Vols. I., II., III., IV., and V. 1896.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections in the Museum of the St. Louis Hospital, Paris. Parts 10 and 11. 1897. Price 10s. 6d. each.

Archives of the Roentgen Ray (formerly Archives of Skiagraphy). Edited by W. S. Hedley, M.D., and S. Rowland, M.A., M.R.C.S. Vol. II. No. 1. July, 1897. Price 4s. net.

THE SCIENTIFIC PRESS, Southampton-street, Strand, London.

The Mystery and Romance of Alchemy and Pharmacy. By C. J. S. Thompson. 1897. Price 5s.

Dr. Mendini's Hygienic Guide to Rome. Translated, with an additional chapter on Rome as a Health Resort, by John J. Eyre. 1897. Price 2s. 6d. net.

Elementary Physiology for Nurses. By C. F. Marshall, M.D., B.Sc., F.R.C.S. 1897. Price 2s.

The Midwives' Pocket Book. By Honnor Morten. 1897. Price 1s.

UNWIN, T. FISHER, Paternoster-square, London.

Mother, Baby, and Nursery: A Manual for Mothers. By Genevieve Tucker, M.D. 1897. Price 3s. 6d.

VOSS, LEOPOLD, Hamburg and Leipzig.

Atlas der Syphilis. Von Dr. Martin Chotzen. Heft. 1 and 2. 1897.

Über die Augenerkrankungen in der Frühperiode der Syphilis. Von Dr. H. Wilbrand und Dr. A. Staelin. 1897.

Praxis der Harnanalyse. Von Dr. Lassar-Cohn. 1897.

University College, Bristol: Calendar for the Session 1897-98 (J. W. Arrowsmith, Bristol, 1897); price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANGUS, CHAS., M.B., C.M. Aberd., has been appointed Medical Superintendent to the Aberdeen Royal Infirmary, vice Lumsden, resigned.

BAILEY, JOHN GEORGE, M.B., C.M. Edin., has been appointed Senior Assistant House Surgeon to the Huddersfield Infirmary, vice T. Hill Jamieson, resigned.

DAVIES, J. E. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer by the Wrexham Rural District Council.

DUNDON, JOHN, M.D., B.Ch., has been appointed Extern Surgeon to Cork Mercy Hospital.

GILCHRIST, THOS., L.R.C.S., L.R.C.P. Irel., has been appointed Assistant Medical Officer to Sligo District Lunatic Asylum, vice G. R. Lawless.

GILES, OSWALD, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Sleaford Rural District Council.

GORNALL, JOHN GUEST, M.A., M.B. Cantab., L.R.C.P., M.R.C.S., has been appointed Visiting Medical Officer to Winwick Asylum for Idiots under Lancashire County Asylums Board.

HARVEY, WM., F.R.C.S., has been re-appointed Medical Officer of Health by the Newton Urban District Council.

HAWTHORN, F., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the No. 4 Sanitary District of the Newcastle Union, and Public Vaccinator for the Central District.

HEATH, A., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a House Physician to St. Bartholomew's Hospital, London.

HUGHES, Wm., M.R.C.S., has been appointed a Medical Officer for the Waenfawr Sanitary District by Carnarvon Board of Guardians.

KERSWILL, H., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Devonshire Hospital, Buxton.

LAWLESS, G. R., F.R.C.S., L.R.C.P. Irel., has been appointed Medical Superintendent of the Armagh Lunatic Asylum.

LLOYD, EDWARD J., M.D., C.M. Aberd., M.R.C.S., has been appointed Medical Officer to the training ship *Clio*, stationed off Bangor, N. Wales.

MOBERLY, S. C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 2 Sanitary District of the Winslow Union, vice H. N. Pelly, resigned.

O'CONNOR, DANIEL J., M.B., B.Ch. Irel., has been appointed Extern Physician to Cork Mercy Hospital.

PETRIE, R. O., M.B., C.M. Edin., has been appointed Medical Officer to the St. Andrew's (Fife) Post Office.

ROBERTS, T., M.B., C.M. Edin., has been appointed a Medical Officer for the No. 2 Sanitary District of Carnarvon.

SLOANE, J. S., B.Sc. Lond., M.B., F.R.C.S., has been appointed an Assistant Surgeon to the Metropolitan Hospital.

SMART, W. P., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Medical Officer by the Hoxne Rural District Council.

STACK, E. H. E., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed a House Physician to the Bristol Infirmary.

STEELE, R. S., M.B., Ch.M. Glasg., has been appointed Medical Officer of Health by the Gnosall Rural District Council.

TEMPLETON, P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the parish of Pirbright.

TRACY, JAMES J., M.B., B.Ch. Irel., has been appointed Intern Physician to Cork Mercy Hospital, vice M. J. Murphy, deceased.

TWIGG, F. G., L.S.A., has been re-appointed Medical Officer for the Mexborough Sanitary District of the Doncaster Union.

WADDELOW, J. J., F.R.C.S. Eng., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Whittlesey Rural District Council.

WARING, H. J., B.Sc. Lond., M.B., F.R.C.S., has been appointed Surgeon to the Metropolitan Hospital, and also Surgeon to the Department for Diseases of the Throat at that Hospital.

WRIGHT, W. H., L.R.C.P. Irel., M.R.C.S., has been re-appointed Medical Officer by the Alvaston District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN CITY HOSPITAL.—Resident Physician at the City (Infectious Diseases) Hospital. Salary £50 per annum, with board and residence at the hospital. Applications to the Town Clerk, Town House, Aberdeen.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for twelve months. Salary £50, with board, lodging, and washing in the hospital. Also Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GENERAL INFIRMARY, Northampton.—Resident Dresser for six months. Board, lodging, and washing provided.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer, unmarried. Salary £200 per annum, with board and residence. Also Resident House Physicians.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon, unmarried. Salary £140, increasing by £10 per annum to £170, with rooms in the infirmary and attendance.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence, washing, and board provided, and an honorarium given at the termination of the appointment.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Salary £15 for that period, with board and residence.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

ROYAL CORNWALL INFIRMARY, Truro.—House Surgeon, unmarried. Salary, first year, £120, increasing by £10 a year to £150, with furnished apartments, fire, lights, and attendance.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Junior House Surgeon. Salary 60 guineas per annum, with board, &c.

STOCKTON AND THORNABY HOSPITAL.—House Surgeon, non-resident. Salary £200 per annum.

SWANSEA GENERAL HOSPITAL.—House Physician for one year. Salary £50 per annum, with board, apartments, laundress, and attendance.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £35 per annum, with board, residence, &c.

Births, Marriages, and Deaths.

BIRTHS.

McDOWALL.—On Sept. 12th, at Menston, near Leeds, the wife of J. G. McDowall, M.D., of a daughter.

REID.—On Sept. 6th, at Oakley, Kirkcudbright, the wife of W. S. S. Reid, M.B., of a son.

MARRIAGES.

BARNES—HOLLIST.—On Aug. 26th, at St. Peter's Church, Lodsworth, by Rev. C. S. Chilver, Vicar of the Parish, assisted by Rev. L. Brooke-Barnett, Curate of Compton, Herbert Cooper Barnes, M.R.C.S., L.R.C.P. Lond., of Petworth, Sussex, youngest son of James Barnes, Esq., of Tiverton, N. Devon, to Lilian Capron, younger daughter of Lieutenant-Colonel E. O. Hollist, of Lodsworth House.

BEDFORD—FOORD.—On Sept. 8th, at SS. Philip and James, Cheltenham, Surgeon-Major W. J. Guthrie Bedford, second son of the late E. S. P. Bedford, F.R.C.S., to Mabel Stanley, fourth daughter of Edward Bromley Foord, M.C.S. (retired).

BELL—MACKAY.—On Sept. 8th, at Elgin, William Bruce Bell, M.B. Edin., Higher Broughton, Manchester, to Helen Louise, youngest daughter of H. M. S. Mackay, banker, Elgin.

BLACKLER—ADAMS.—On Sept. 8th, at St. Mary the Virgin, Primrose-hill, Henry John Blackler, M.B., of Redhill, to Sybil Mary, daughter of W. Bridges Adams, M.R.C.S., &c., of Belsize-park.

DOBBYN—TAUNTON.—On Sept. 9th, at Holy Trinity Church, Birchfield, Michael Gilbert Dobbyn, L.R.C.P., L.R.C.S. Irel., of Bishopston, Bristol, to Frances Elizabeth, younger daughter of Mr. R. H. Taunton, of Brook Vale, Witton, Birmingham.

GOODCHILD—BRITTAIN.—On Sept. 8th, at St. Barnabas's Church, Bartholomew-road, N., John Goodchild, M.R.C.S., L.R.C.P., of 9, Highgate-road, N., to Alice Emma (Dollie), second daughter of John Brittain, of Hilldrop-road, Camden-road, N.

HAYDON—CHRISTIE.—On Sept. 9th, at St. Stephen's, Avenue-road, London, Thomas Horatio Haydon, B.A., M.B., of Marlborough, to Minnie, second daughter of the late John Christie, Park-crescent, Stirling, N.B.

MAW—MCNAMEE.—On Sept. 15th, at the Parish Church, Kensington, Henry Trentham Maw, M.D., second son of Charles Maw, of Nutfield, Surrey, to Elizabeth, youngest daughter of the late Peter McNamee, Sherwood Foresters, of Dundalk, Ireland.

STEPHENS—BUTLER.—On Sept. 9th, at St. Stephen's Church, Kirkstall, Leeds, Cecil Edward Stephens, M.B. Edin., younger son of the late Dr. Stephens, of Dodding'on, to Enid Rose Harding, eldest daughter of A. Edmund Butler, J.P., of Kepstorn, Kirkstall.

SYDENHAM—TURNER.—On Sept. 3rd, at Holy Trinity, Cheltenham, by the Rev. Percy Waller, Fredk. W. Sydenham, M.B., C.M. Edin., D.S.Sc. Vict., of Walsall, to Nellie King Turner, of Cheltenham.

THORPE—RODHAM.—On Sept. 10th, at Yateley, Hants, by the Rev. R. Oscar T. Thorpe, M.A., Rector of Anstey, Herts, father of the bridegroom, assisted by the Rev. C. D. Stooks, M.A., Vicar of the Parish, Surgeon V. Gunson Thorpe, R.N., M.R.C.S., to Maude, daughter of the late Fleet-paymaster C. R. Rodham, R.N.

DEATHS.

RYE.—On Sept. 1st, at his residence, Westbury, Caterham Valley, Surrey, Arthur Brisley Rye, F.R.C.S., aged 85.

STEPHENS.—On Sept. 11th, in consequence of a bicycle accident at Preston, Richard John Stephens, M.R.C.S. Eng., L.S.A. Lond., Assistant Medical Officer, County Asylum, Whittingham, Lancashire, in his 34th year.

TANNER.—On Sept. 14th, in London, Mark Batt Tanner, M.D., formerly of Brighton, in his 65th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 18th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Sept. 10	30·23	N.E.	...	103	65	45	49	52	Fine
,, 11	30·39	N.E.	...	101	69	48	51	54	Fine
,, 12	30·43	S.W.	...	100	65	50	54	58	Hazy
,, 13	30·46	N.W.	...	105	68	49	49	51	Hazy
,, 14	30·46	N.E.	...	109	60	55	55	57	Cloudy
,, 15	30·33	S.W.	...	101	69	53	54	57	Foggy
,, 16	30·09	N.W.	...	84	64	58	55	59	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

A QUESTION OF ETIQUETTE.

WE have had a statement submitted to us from one of the interested parties concerning the seeing of a patient, B, under the care of one practitioner, C, by another practitioner, D, in C's absence, at the request of B and her husband, A. So far as we can judge from the statement—a one-sided one, in that it emanates from one of the practitioners only—D acted with absolute courtesy and professional rectitude, and is in no way to blame.

Notifications.—We regret to be quite unable to give a definite answer at so short a notice and on such scanty information. If a detailed account of the matters in dispute is sent to us, with full names and dates (of course, in confidence), we will endeavour to assist our correspondent who, in the meantime, is advised not to go to law without being sure of his ground and backed by a solicitor's opinion.

TREATMENT OF EPISTAXIS.

DR. HAGEDORN, writing in a recent number of the *Zeitschrift für Praktische Aerzte* on epistaxis, assures his readers that if the patient is merely made to hold his head up high so that the ale nasi are pressed against the septum 90 per cent. of the cases which are due to hæmorrhage from the anterior cartilaginous portion of the septum will cease. A speculum should then be very cautiously introduced and an examination made in order to find out whether any ulcer or varicose vein exists. If so it should be touched with the galvano-cautery or trichloracetic acid after cocaine has been applied. The eschar which this produces must not be disturbed, great care being taken in this respect whenever the nose is blown; it will fall off in eight or ten days. If the hæmorrhage comes from the inferior or middle turbinated bone plugging must be resorted to, which is best effected through the speculum by means of small tufts of aseptic wool, care being taken to see that no blood is escaping by the pharynx. After the plug has remained twelve hours it should be removed, and the spot from which the bleeding proceeded cauterised as in the other class of cases. Where the hæmorrhage comes from the posterior parts of the nostrils the naso-pharyngeal space must also be plugged, and this is best accomplished by the introduction of tampons of aseptic wool by means of well-curved polypus or laryngeal forceps, guided, of course, by the finger. This plug must on no account be allowed to remain more than about twelve hours for fear of erysipelas, gangrene, septicæmia, or purulent otitis supervening; if necessary a fresh plug may be introduced. Perchloride of iron wool is, in Dr. Hagedorn's opinion, distinctly dangerous. The most troublesome cases of all are those in which there is general parenchymatous oozing in subjects of hæmorrhagic diathesis; here repeated plugging, absolute rest, and hydrastis Canadensis should be employed. Sprays are not to be recommended.

M.B., C.M. Glasgow.—An M.D. need not qualify his degree by adding his University, but we always advise him to do so. For the rest, we do not quite understand what it is our correspondent complains of.

EXAMINATION GEMS.

DR. W. D. HAMAKER, a member of the State Board of Medical Examiners, has communicated to the current number of *The Pennsylvania Medical Journal* an amusing little note on the blunders that have been made by students who have appeared before him in the course of his official duties. Some of the medical errors which he chronicles are decidedly astounding as well as amusing, for it is difficult to understand how a candidate capable of giving such answers as those that now follow could ever have conceived that he had commenced to study his subject:—

"'Hydrogen gass is degenerated from the urea'; 'Cantharides is derived from the root of the plant'; 'Pix liquida is from the Pinus Sommferous group'; 'Cantharides is derived from the destructive distillation of the Spanish fly'; 'The malar bone articulates with the occipital bone'; 'Picrotoxin is an alkaloid of senna and rhubarb'; and 'Spartein and eserine are alkaloids of somnis papaverum.' One hopeful candidate said that 'Spartein was derived from Sparta,' and another that it 'was derived from Spartus.' Another said 'that vinegar was an antidote for mineral acid poisons,' and another stated that 'An infusion of Spanish fly was one of the official preparations.' Another gave us the information that 'the uriniferous tubules secrete the seminal fluid.' Another said that 'belladonna locks up all of the secretions except the urine and feces.' Another stated, without additional matter of any kind, that 'the differential diagnosis between epilepsy and hysteria is that in epilepsy they fall on the stove and burn themselves and in hysteria they don't.' Turning to obstetrics we found one man who, in rigid os, 'would decapitate or perform craniotomy or would put on the forceps and deliver at once.' Another in performing version 'would put his finger in the child's mouth and bring the chin under the os pubis and hold his hand over the mouth to prevent the liquor amnis from choking it.' Another stated 'that the endoxardium is a mucous membrane which weighs 2oz., and is separated from the pleura by the pericardium.' Another stated 'that the function of the optic nerve is to contract the pupil and move the eyeball.' A new diagnostic symptom was offered by the gentleman who stated in a written paper that 'in cerebral hæmorrhage the patient may vomit the cerebro-spinal fluid.'"

Dr. Hamaker also gives examples of instances of want of common education, advancing them as arguments that a higher level of preliminary education should clearly be required from the American medical student.

One applicant spelled tongue, "tong"; another spelled salts, "saults"; another spelled broom, "brougham"; another spelled fly, "fley," and flies, "flyes"; one young lady spelled sugar, "shugar"; another applicant spelled Spain, "Spane"; fir-tree was spelled "fur-tree"; another spelled pulse, "pultz"; and sore was spelled "soar"; and another spelled pus "puss."

QUEERNESS IN A TALE.

A "QUEER STORY" in *Truth* is not to be taken seriously, but even in ephemeral literature there are limits beyond which queerness should not be pushed, and in the *Truth* feuilleton of Sept. 2nd that limit was exceeded. Mr. Hall Caine's specimen of the nursing sisterhood has a few redeeming points, but *Truth's* specimen, Nurse Denison—although Dr. Pillington describes her as "the most attentive nurse in London ..... and one of the few whom I can really trust in very critical cases"—can only be pronounced a hopelessly weak-minded, vicious simpleton, without any redeeming points whatever. "Dr. Pillington had a very 'smart' practice indeed. It was an almost exclusively society practice, only touching here and there one who was outside the sacred pale. He was eminently qualified for this class of work, being distinguished by exceptional polish and refinement, and having the air of a thoroughly well-bred man, which, indeed, he was." But, unfortunately, this paragon was also a confirmed gambler, and had been "mad enough to forge another man's signature to a promissory note." One Scaasi, "a blood-sucking usurer," finds this out, and in the ordinary course of his business puts the screw on Dr. Pillington "to make some intentional mistake in his treatment" of a certain Duke, whose spendthrift son and heir in consideration of an immediate advance of £20,000, had executed a post-obit bond for £100,000 in favour of the said blood-sucker. So far the lines of the humble penny dreadful have not been notably departed from, but *noblesse oblige* and queerness has been dragged in *coûte que coûte*. The paragon recoils with horror from the dastardly scheme. He is far too well-bred to commit such a base crime himself, so lets Nurse Denison know that he would like her to carry out the usurer's order. Nurse Denison, who has been winning the Duke's gratitude by attending on him "with a skill, a gentleness, a consideration that were beyond all praise," has not the slightest objection to oblige, and his Grace incontinently receives "a double dose of his sedative medicine," which, *mirabile dictu*, at once proves fatal. The poisoner, it should be noted, was not actuated by any "sordid or selfish motive." Far from it. "She was madly in love with Dr. Pillington, and she did what she did solely for his sake."

L.F.P. & S. will find in our Students' Number (published this year on Aug. 21st, but as a rule published in the first week in September) full information on the subject. All the fees for the different courses at the different London hospitals are there given in detail.

Vienna.—We have inquired.

STERNUTATORIES AS A SUBSTITUTE FOR THE FORCEPS IN LABOUR.

To the Editors of THE LANCET.

SIRS,—On reading Dr. Lauder Brunton's interesting book ("Lectures on the Action of Medicines") I was surprised, and not a little astonished, to see the statement that "sternutatories are sometimes employed in country practice as substitutes for the forceps in labour." Now I do not for a moment suppose that anything in the way of a sneer was meant in this opinion, or that the forceps are not as intelligently used by the country practitioner as by his *confrère* in town. I have certainly heard of sternutatories used as an aid to labour, but mostly, I think, by old women, and in the form of snuff, but certainly not by country medical men, specially as a substitute (or in the way of saving labour) for the forceps. However pleasant sneezing may be, and no doubt a good sneeze is not to be despised, yet very few intelligent accoucheurs, either in town or country practice, would risk allowing the fœtus to be expelled in this perfunctory and, let me add, unscientific manner, and thus running the untold risks of perineal rupture and death from hæmorrhage to both mother and child. So far from trusting to such unsatisfactory substitutes, and in this category I do not exclude ergot, the country practitioner has been blamed with using instruments too freely, and I am sure very few men, especially those with anything like a wide experience, would for a moment compare these more or less unreliable remedies to the scientific adaptability of a good pair of forceps. No; with the forceps we can guide, control, and complete the labour when we choose, and thus perhaps, not only save a child's life, but the patient a certain amount of prolonged and unnecessary suffering. A practitioner who knows anything about forceps delivery will not for one moment consider the trouble of applying the instrument, but, like every other scientific operator, rather take a positive pleasure in the assured and apparent efficiency of his art. It is not always given to the country practitioner to step forward on the platform of recognised merit, but I think in matters obstetric he was not born yesterday (if I may be allowed the vulgarism) nor necessarily in the country.

I am, Sirs, yours faithfully,

Rothwell, Northamptonshire. JAMES MORE.

Inquisitive should consult his medical attendant. The case is one in which special assistance might be necessary, and his medical attendant could tell him whom to consult. We do not give medical advice.

MORE QUACKERY.

A CORRESPONDENT sends us the following handbill, which we reproduce *verbatim et literatim*. In our opinion the Christian young men of Walsall might find some better use for their private rooms than to lend them to ignoramuses of this kind. At what date was Sir Andrew Clark ever "Sir Morrell McKenzie"? Some day possibly some patients, "after having been fit with an appliance," will discover that they have been swindled, but until this sort of thing is made illegal it will always flourish. We observe that "spinal weakness" is "a speciality." Personally we should have thought the weakness existed in another part of the organism, but pigeons for plucking will always be found by those who look for them.

A WORD TO SUFFERING WOMEN.

NURSE SLATER

will visit WALSALL for four weeks, commencing Wednesday next. Hours 2.30 to 6 p.m.

ADVICE FREE

At the Private Rooms of the Y.M.C.A., Freer St., WALSALL.

Mrs. Slater's experience in all Inward Complaints of Women is unequalled. Her

PROLAPSUS UTERI BELT

is Specially Adapted for the Prevention and Cure of the Falling of the Womb, without wearing any Inward Instrument whatever.

Sir Andrew Clark, late Sir Morrell McKenzie, Dr. Stephen McKenzie, &c., &c., can with confidence recommend her Appliances to the suffering.

TUESDAYS ONLY.

Many who have suffered from this painful complaint and have tried instruments of every kind and derived no benefit, have proved the Belt a great blessing.

Those who have only been able to do their work in pain and suffering have soon found relief, and thousands who had given up hope of ever being well again are now going about as well as ever they were in their lives.

Rings, Cradles, and every description of Inward Instruments are now almost universally condemned by the medical profession—because such things are the source of tumours to an alarming extent.

A poor woman from Wolverhampton, who earned her living at the washtub, and who had worn a Belt for 2 years, wrote: "Before wearing your appliance I never had a day's comfort. The bearing down Pains, and pains in my back, were so bad that I scarcely knew what to do. Now I am like another woman. I can do my work, and it is a pleasure to do it."

It is of great importance that any wishing to see her should do so at once as she cannot stay but a few weeks, and she always prefers to see each patient after they have been fit with an appliance in order to judge how they are progressing.

The great difficulty is to persuade sufferers that they have nothing to be afraid of. One who came said, "Why, Mrs. Slater, I was afraid of coming, but had I known who I was coming to, I shouldn't have had any need. It's more like seeing a friend than anyone else."

THE COMPRESS BELT

For Stoutness, is invaluable to all stout people. It not only reduces the measurement, but it causes them to breath much easier and freer, and also causes walking to be a pleasure. ALL ADVICE FREE.

SPINAL WEAKNESS a Speciality. Don't delay your visit.

TUESDAYS ONLY.

Mr. Slater will attend for Men at the same Address

FROM 5 0 P.M. TO 6.0 P.M.

If you are ruptured, see him. If he cannot hold your rupture he will tell you so. No person need suffer from an ill-adapted or bad-fitting Truss. All children may be cured permanently if brought in time. Come soon. No charge for advice. Note address and hours of attendance—

Private Rooms of the Y.M.C.A., Freer-street, Walsall.
Hours 5 to 6.

Adipose Tissue.—A medical man writing under this pseudonym would feel much obliged to anyone who could give him full particulars of Mr. Banting's system of dieting for obesity, or of any other system which would have a similar effect.

A Correspondent in Whitehaven.—"A Code of Medical Ethics," by Jukes de Styrap, M.K.Q.C.P., &c. H. K. Lewis, Gower-street, London, W

"THE DISPOSAL OF IMPORTED BAD EGGS."

DR. COLLINGRIDGE (the medical officer of health of the Port of London), in reference to the annotation in THE LANCET of Sept. 11th under the above heading, refers us to an article in the *City Press*, which says that the cargo of eggs was not condemned at Greenwich and by the Port Sanitary Authorities, and that this fact relieved them of the responsibility of disposing of the offensive cargo in an efficient manner. If the eggs had been condemned by the Port Sanitary Authorities they would have been disposed of in a more approved way. But we still do not see why the eggs were not condemned at Gravesend, in which case we do not doubt they would have been so disposed of as at any rate not to have led to a nuisance and offence to the neighbourhood, as was the case when they were destroyed at Limehouse.

Lungo.—What our correspondent proposes to do is always open to the accusation of unprofessional conduct. He must be a law to himself, for he alone knows how far his negotiations with a brother practitioner have given him an insight into matters which would otherwise have remained private for him.

J. R. T.—If our correspondent's friend did not raise the point in his agreement and has received his salary weekly we think he must accept a week's notice.

"FONETIK AND RASHONAL MEDIKAL FRAZEOLOGY."

A FREQUENT correspondent sends us the following *résumé* of a paper read by Dr. George M. Gould, of Philadelphia, the author of the magnificent medical dictionary, in which the cause of a "simpler" spelling of medical terms is amusingly urged:—

"Specifically, the microscopic modifications I urge are," says Dr. Gould:—

"1. Abolish in English words archaic, unnecessary, bothersome 'æ' and 'œ,' supplanting them by 'e.'

"2. Cease adding tautologic 'al' to adjectives having already one adjectival suffix 'ic'—already done in thousands of words; finish the job. As, prosaic for prosaical.

"3. Drop the useless hyphen in words whose parts are derived from classic languages. In ten thousand words you have already done so; finish with the rest. Retain the hyphen in such compound terms as express a single idea by two semi-fused English words, especially when both are nouns; as, antitoxin (not anti-toxin), culdesac, postmortem, ventrofixation, &c. Keep the hyphen, because necessary to avoid confusion and doubt, in curette-spoon, heart-murmur, skin-disease, sleeping-sickness, &c.

"4. Drop useless 'te' from curette, brunette, fourchette, etiquette, cigarette, &c. You have already lopped it off from cutlet, doublet, quartet, quintet, sextet, septet, racket, minuet, fillet, corset, stylet, tourniquet, bouquet, &c.; finish the job. Cut off useless 'me' from many words, writing program, gram, centigram, &c., just as already we do telegram, anagram, diagram, epigram; let us make an end of it.

"5. Use figures instead of spelling out numbers, at least above ten.

"6. Anglicise foreign terms when a goodly proportion of your readers will not understand them in the originals. Use italics as little as possible; use as few foreign words and terms as possible, because the vast majority of your audience cannot understand them (even if you do); and because there is a deal of silly conceit in airing exotics of speech.

"7. As to chemic terms, accept recommendations of the American Association for Advancement of Science, which, after years of dispassionate investigation, advised dropping final 'e' in bromide, iodide, bromine, iodine, atropine, quinine, &c. Say phenol for carbolic acid, glycerol instead of glycerine, &c.

"8. Abolish diæreses and accents. They cannot teach pronunciation: they are useless luggage. Let us write oophorectomy, cooperation, ptomain, leukomain, &c., without the diæresis. When a foreign word is Anglicised let us do it completely, and not drag into our domain exotics of foreign habit, leaving it, e.g., neither English nor French. To poets leave the acute, grave, and circumflex accents, foreign to the spirit of our tongue.

"Finally, consider the source and secret reasons for opposition to the foregoing. Ignorance—colossal, imperturbable, impertinent ignorance characterises much of it. ..... Not only can there be no valid objection to such simplified spelling, but there are many good reasons for its use. We must get out of this thraldom of foolish, difficult, and heterogeneous spelling."

Busy Practitioner will find no convenient books embracing both subjects. The names of the books answering his purpose will be found on p. 442 of the Student's Number of THE LANCET, Aug. 21st, 1897.

PROPOSED CASTRATION OF IMBECILES AND CRIMINALS.

THE *Philadelphia Medical and Surgical Reporter* states that a Bill has been introduced into the Michigan Legislature providing for the castration of all inmates of the Home of the Feeble-minded and Epileptic before their discharge, of all persons convicted of felony for the third time, and of those convicted of rape.

SOFT RUBBER SCREW DRAINAGE TUBE.

To the Editors of THE LANCET.

SIRS,—Cases occasionally occur where deeply-seated abscesses have to be drained through a sinuous track through which it is impossible to pass an ordinary drainage tube and dangerous to use long sinus forceps or tube introducers. In such cases as small localised empyemata, localised peritonitis, drainage after ruptured extra-uterine gestation, abscess situated amongst the bowels with a sinuous sinus, I have found the following device invaluable. An ordinary drainage tube is neatly cut with sharp scissors into the form of a right-handed screw at the end. It is put into the sinus, and when its course is arrested it is turned round to the right. The end easily finds its way in the right direction and the rest of the tube follows without any damage to the surrounding parts, and with a facility which is often surprising.

I am, Sirs, yours faithfully,

THOS. CARWARDINE.

*** The device is new to us, and strikes us as very ingenious.—ED. L.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Luton Reporter, South Wales Daily News, Derby Daily Telegraph, Manchester Guardian, Bradford Daily Telegraph, North-Eastern Daily Gazette, Edinburgh Evening News, Newcastle Chronicle, Dundee Advertiser, North British Daily Mail, Times of India, Pioneer Mail, Walsall Advertiser, Builder, Sheffield Independent, Rangoon Gazette, Bombay Champion, Western Morning News, Herald of Wales, Architect, Liverpool Daily Post, North Wales Chronicle, Ayrshire Post, Worcestershire Chronicle, Huddersfield Chronicle, Bury Guardian, Somerset Gazette, Hereford Journal, Leek Times, Yorkshire Post, Bournemouth Directory, Sussex Daily News, Scotsman, Citizen, Eastbourne Gazette, Reading Observer, Cheltenham Mercury, Bridgwater Independent, St. Andrew's Citizen, Hastings Independent, Norwich Mercury, Birmingham Post, Bromsgrove Messenger, Bristol Mercury, Chester Chronicle, Cambrian, Leicester Post, Gloucestershire Chronicle, Bedford Times, Keene's Bath Journal, Portsmouth Times, Leeds Mercury, Kidderminster Shuttle, Elgin Courant, Norfolk Chronicle, Cape Times, Le Temps, Sanitary Record, Brighton Gazette, Hertfordshire Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, City Press, Reading Mercury, Surrey Advertiser, Public Health, Engineer, Guy's Hospital Gazette, Local Government Journal, Le Courier de la Presse, North British Agriculturist, Gazette (Montreal), West Middlesex Herald, Prescot Reporter, &c., &c.**

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Æsculapius, Lond.; Alpha, Lond.; Mr. J. M. Atkinson, Hong Kong.

B.—Mr E. Burden, Lond.; Gebrüder Borntraeger, Berlin; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. H. A. Ballance, Norwich; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. Alfred Bishop, Lond.; Dr. Bell, Hong Kong.

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F.—Fullers, Ltd., Lond.; Mr. G. Fowler, Hanley; Messrs. Fairbairn and Sons, Edinburgh; F. W. F.,

G.—Mr. L. M. Griffiths, Bristol; General Prisons Board, Dublin, Chairman of; Dr. L. Grant, Oban, N.B.; Dr. W. Herbert Gregory, Beverley; G. S., Lond.

H.—Dr. J. Hawkes, Bournemouth; Highbury Grange (8), Lond.; Dr. B. M. Howland, Panama, U.S.A.; Mr E. Henry, Haflong, India; Mr. E. B. Harper, Bournemouth; Mr. W. C. Henderson and Son, St. Andrews; Messrs. Hughes and Hughes, Flint; Messrs. W. Hatchman and Co., Lond.; Mr. H. N. Hardy, Lond.; Mr. D. P. Heatley, Edinburgh; Mr. J. W. Hill, Reigate; Mr. J. Heywood, Manchester; Mr. A. B. Harris, Lond.

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V.—Vegetarian Federal Union, Lond., Secretary of; Veitch, Lond.

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Y.—York Retreat, Secretary of.

Letters, each with enclosure, are also acknowledged from—

A.—Arithmos, Lond.; Ajax, Lond.; Messrs. Armour and Co., Lond.; Arfon, Liverpool; Dr. Aitchison, Blackburn; A. T. I., Lond.; A., Lond.; Abstainer, Lond.; Anthrax, Lond.

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X.—X. Y. Z., Lond.; X., Lond.; X'phoid, Lond.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

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